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**GEOGRAPHICAL, RELIGIOUS, AND PHILOSOPHICAL THOUGHT:
FOLLOWING THE HIGH ROAD AND FINDING
COMMON GROUND IN ENVIRONMENTAL ETHICS**

by

Roxanne L. Lalonde, B. Soc. Sc.

**A thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfilment of
the requirements for the degree of**

Master of Arts

Department of Geography

**Carleton University
Ottawa, Ontario
April 1994**

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**"GEOGRAPHICAL, RELIGIOUS, AND PHILOSOPHICAL THOUGHT:
FOLLOWING THE HIGH ROAD AND FINDING
COMMON GROUND IN ENVIRONMENTAL ETHICS"**

submitted by Roxanne L. Lalonde, B. Soc. Sc.
in partial fulfilment of the requirements for
the degree of Master of Arts

David Bennett, Thesis Supervisor

Iain Wallace
Chair, Department of Geography

Carleton University
April 1994

Abstract

This thesis responds to several voids perceived in geographical literature by examining different themes in environmental ethics. The voids identified by geographers in recent publications are: (1) the absence of environmental issues in geographical works on post-modernism, (2) the need for geographers to engage explicitly in ethical analysis of environmental and sustainable development issues, and (3) the lack of spiritually informed geographical literature. The thesis traces the development of environmental thought in the West, highlighting the contributions made by geographers. An organizational framework is offered in conjunction with an analysis of several philosophical and spiritual approaches to environmental issues. The analysis of these approaches yields several common, potentially unifying principles upon which a global sustainable environmental ethic might be based. The thesis proposes “unity in diversity” as a conceptual framework for such an ethic.

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To compensate for the trees that gave their lives in the production of this thesis, a financial contribution has been made to the Bahá'í International Community's Office of the Environment to assist in its reforestation activities.

This thesis is dedicated to the memory of my father, Albert A. Asminskas (1919-1967).

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Introduction

What's the use of a house if you don't have a decent planet to put it on?

Henry David Thoreau

This thesis responds to some of the issues arising from that question by exploring the moral and spiritual principles underlying different philosophical approaches to the environmental crisis. The essential purpose of the thesis is to offer an alternative to the current tendency toward fragmentation in post-modernism by presenting a concept and set of principles upon which a global sustainable environmental ethic might be based. This work responds to recent perceptions in geographical research that there are several voids in this field. It also contributes to a growing body of literature that attempts to integrate numerous approaches to science and to the analysis of human impacts upon the earth.

The nature of this research requires a methodology and presentation that differs from the "normal" social science thesis. This work is largely a reflective exercise, drawing from and analyzing the works of scholars in several fields.

Identification of the Voids

The numerous philosophies and activist movements surrounding environmental issues are part of the wave of post-modernism that has recently swept across Western civilization. Edward Relph comments on the lack of attention paid to the environment by geographers writing about post-modernism and reflects on a major problem with the post-modern ideal: "If there are no firm grounds for deciding what is the best way to do things, how then is it possible to settle on any particular approach, and to act with conviction in ways that are just and reasonable? . . . How . . . will it be possible to do anything about global climatic change or the deficiencies in global capitalism if there can be no universal

grounds for articulating corrective strategies?" (Relph, 1991, p. 104). Relph's questions raise an issue crucial to this research and to the recent work of other geographers, that is, the explicit incorporation of ethical debate in social science research and writing.

One geographer laments the tendency of many geographers to neglect the global and local manifestations of the social and environmental crises by focussing on "peripheral things" such as geographical influences on Canadian cinema, the distribution of fast-food outlets in Tel Aviv, or "the chauvinist self-indulgence of our contemporary obsession with the minutiae of our own affluent and urbanized society." His suggestion is bluntly put: "Fiddle if you will, but at least be aware that Rome is burning all the while" (Stoddart, 1987, p. 334). Regardless of what we choose to study, we must always have in the back of our minds a well-reasoned response to the question, "Why are you doing this research?" Stoddart reminds us of the pioneers of geography who

dared to do something that we, in our sophistication, rarely do. They asked the big questions, about man, land, resources, human potential. . . . We need to remember that science is about asking daring questions like these.

We no longer ask these questions: but the questions remain. It is largely people other than geographers who are asking—and answering—them now.

We need to claim the high ground back: to tackle the real problems: to take the broader view: to speak out across our subject boundaries on the great issues of the day. . . . (p. 334)

Maureen Reed and Olav Slaymaker offer a "preliminary perspective" on the ethical aspects of sustainability, identifying geography's "lack of engagement with ethics" as a "central weakness" in efforts from within the discipline to address issues pertaining to sustainability. The message to their colleagues is direct:

A discussion of the roles of culture and ethics in issues of environmental quality, social equity, and sustainability is urgently needed. Geographers, with long-standing interests in understanding human-environment relations and the distribution of human welfare, can make important contributions to the ethics debate. . . .

Unless geographers engage in questions of ethics, we believe that our contribution to the sustainability debate will (and should) remain muted. (Reed and Slaymaker, 1993, pp. 723, 735)

The analysis of different environmental philosophies and the companion framework, and the spiritual and moral principles presented in this thesis are essential features in my effort to respond to Relph's, Stoddart's, and Reed and Slaymaker's perceptions of gaps in geographical research. This thesis is an attempt to broaden current research and activity in geography that focuses on more pragmatic or empirical aspects of environmental impact assessment, conservation and resource management, and sustainable development. This thesis offers an additional step beyond the ethical analysis called for by Reed and Slaymaker. The work is explicitly based on a belief that universal spiritual principles exist and are necessary if solutions to global problems are to be found. By identifying spiritual principles underlying a sustainable environmental ethic, this thesis offers a means by which humanity might move beyond the paralysis that often ensues when the conflicts between opposing moral viewpoints come to the fore.

The spiritual content of the work also addresses themes raised in the following, in which Peter Gould states that the "well-spring" of the teacher and the geographer

is the ability to feel and stand in awe at the very mystery of Being, the mystery of our own human presences, of our being-in-the-world, and our capacity to give meaning to a world that is always interpreted by the human presence. What could be more geographic than that? It contains the mystery of human intentionality that leads to purposeful scientific inquiry. It holds the mystery of beauty that carries the aesthetic capacity to flood us with awe and joy. . . . [This capacity] is a religious sense capable of being shared by all human beings, toward the mysteriousness of Being that leads to thinking and thanking. . . . I have seen no mention of such informing ideas, of such wellsprings of inquiry and teaching, in any geographic publication. (Gould, 1991b, p. 331)

Geographers are beginning to respond to these perceived voids in our discipline. Although such efforts remain few and far between, analysis of this type is not unprecedented. This thesis follows in the rich tradition of humanistic approaches to geography. As will be seen in Chapter 3, geographers have been exploring many of the themes in this research since the early days of the discipline; however, much of this work has been obscured by recent infatuations with more quantitative themes and methods.

In a thesis of this type, in which the primary sources of research material are the published thoughts of others and the writer's own views, I feel that it is important that the philosophical context of the research be established at the outset. Readers are not expected to accept the principles discussed in this thesis or to reconcile them with their own personal beliefs, but rather, are asked to engage in a metaphysical and intellectual exercise to attempt to assess the validity of the argument based on their own observations of the world and their comprehension of the principles set out in the next chapter.

Conceptual Framework

The knowledge upon which a global environmental ethic might be founded already exists. Ideas regarding the interdependent relationship between human beings and the rest of creation can be found in numerous cultures around the world. We do not need to devise new or "radical" formulas. The principles upon which ecologically sustainable practices could be based are deeply rooted in the human psyche; however, they have been suppressed or evaded by some (primarily Western) cultures over the past few centuries.

This thesis articulates the concept of *unity in diversity* as a means of establishing a spiritual and philosophical framework for the integration of several environmental perspectives. Ethical and spiritual principles that incorporate the inherent organic interdependence of all life provide the central foundation of unity in this discussion. Essentially, the unity occurs at the global level in terms of principles that apply to all human beings regardless of their ethnicity, religion, age, sex, geographic location, economic or social circumstances, or any other factors that present potential sources of conflict in the contemporary world. These principles apply to humans simply because they are human and, therefore, have a unique responsibility and particular abilities that allow them to transcend some natural limitations by which the rest of creation is constrained. The diversity is expressed at the local or individual levels in various systems and patterns of behaviour (e.g., agricultural practices that reflect an understanding of the

natural balance in the local ecosystem; settlement patterns that minimize alteration of the natural landscape to accommodate human inhabitants; production and consumption habits that reflect the ability and capacity of the natural environment and its inhabitants to sustain such habits). The geographical parameters at this level are based on factors that comprise bioregions, a term that will be defined and discussed in Chapter 4.

This call for an ethic based on unifying principles is not unprecedented. The environmental literature is replete with exhortations such as the following:

The world is in a deep environmental crisis. This crisis is rooted in global patterns of human behaviour that are ecologically unsustainable, socially alienating and economically unjust. We need a transformation of human purpose that unites material and spiritual realities and creates a common conscience; a conscience which restores and nurtures a world of balance and harmony, peace and justice; caring through community trusteeship, stewardship and accountability for now and future generations.

This statement is taken from the Universal Code of Environmental Conduct, the Declaration of the NGO/Media Symposium on Communication for Environment, which took place in Thailand in October 1990. The Code highlights many of the themes pursued in this research by emphasizing the balance required between material and spiritual pursuits and the unification of purpose needed to achieve that balance on a global scale. This thesis is one contribution to such unification, blurring the lines that separate academic disciplines and searching for common ground between the sciences and the humanities. The explorations underway here and by humanity in general require a return to our basic roots, essentially, broadening our understanding of what makes us human and applying that understanding in our daily affairs.

The concept of unity in diversity has the potential for profound and far reaching applications. For the purposes of this study, it is applied to the spiritual and ethical principles underlying various environmental philosophies. The proposed framework is based on the concept of sustainable development presented in the second World Conservation Strategy, *Caring for the Earth* (1991). Development is sustainable when it allows all human beings to meet their basic material and spiritual needs within the

carrying capacity of the earth's ecosystems. This refinement of the Brundtland Commission's definition in *Our Common Future* makes more explicit the notion of interdependence of all creatures on the planet—human and non-human—and reflects the balance inherent in natural systems. The challenge for natural scientists is to discover what that carrying capacity is by applying wisdom and technological expertise in their research. The added challenge for all of humanity is to ensure that our daily practices, our social, political, and economic systems, and other expressions of human culture do not impede the earth in providing sustenance for its inhabitants. By analyzing the normative factors underlying several philosophical and theoretical approaches to human interaction with the natural environment, it may be possible to discern significant common ground among diverse approaches to offer evidence that unity is possible even in the midst of the fragmentary tendencies of post-modernism.

Organization

The first part of the thesis presents the philosophical, historical, and theoretical contexts for the analysis of the spiritual foundations of several environmental approaches and a discussion of the proposed global sustainable environmental ethic. Chapter 1 sets out the philosophical foundations for the research, essentially drawing the reader into the mindset that created this work, informing the reader of the moral and spiritual principles underlying the thesis. The first chapter provides a background for why this research is being done, how those principles have shaped the course of the research and writing, and how the various themes presented in each chapter are interconnected. This chapter also discusses the methodology used in this research.

The next three chapters review the literature on the history and development of environmental thought and ethics. Chapters 2 and 3 set the philosophical and historical contexts of the analysis by covering: (1) the historical foundations for prevailing perspectives regarding the environment; (2) the ideological, philosophical, and cultural

influences that shape contemporary Western society; and (3) the contributions that geographers have made over the last 150 years to the themes underlying this research. Except for the closing section of Chapter 2, the historical surveys in both chapters selectively emphasize significant individual contributions. This strategy *humanizes* the discussion, drawing attention to specific individuals who have offered their ideas for public scrutiny. Chapter 2 presents various explanations of how Western society has reached its current state in terms of attitudes towards the environment. The discussion follows Judeo-Christian thought as it emerged out of ancient Roman and Greek civilizations and was refined during the Middle Ages, the Renaissance, the Enlightenment and the Scientific Revolution, and the Romantic Era. Ideas are drawn from several fields, with specific attention being paid to geographers. Chapter 2 also offers a brief overview of some current themes such as post-modernism, feminism, and liberal democracy, and alternatives such as spiritually based explanations of society and human nature.

This discussion provides a transition into the third chapter, which traces the history of geographical contributions to environmental thought and increased understanding of environmental impacts on the human experience and vice versa. Contributors to this discussion range from anarchists such as Peter Kropotkin and Élisée Reclus in the late 19th century, British geographers Vaughan Cornish and Sir Francis Younghusband early this century, Carl Sauer, John Kirtland Wright, and their contemporaries in the United States, to contemporary geographers such as Timothy O'Riordan and Yi-Fu Tuan. Some of the themes covered are human perceptions of nature, the expressive responses that follow, and various aspects of the impacts of the human-nature relationship.

The review and appraisal of environmental philosophies and management strategies (Chapter 4) is the foundation for the proposed framework or conceptual map. The following approaches are explored: deep ecology, social ecology, ecofeminism, ecological humanism, animal rights activism, reform environmentalism, "green" marketing and consumerism, bioregionalism, Native spirituality, Judeo-Christian

ecology, and the Bahá'í perspective on nature.¹ The discussion focuses specifically on these opinions and theories especially as they are presented in environmental ethics.

Studying environmental ethics for those who are not professional philosophers is, in one sense, like looking for treasure in the deep end of a swimming pool while wearing a blindfold. It often feels like one is groping around in the dark, with progress impeded by the sheer weight of the verbiage. One must, eventually, surface for air. Upon reaching the surface, however, one discovers that if one exits the pool and removes the blindfold, the treasure is clearly visible on the bottom. One also discovers that the pool from which one has emerged is surrounded by dozens of other pools, each containing an intellectual or spiritual tradition. One finds native spirituality, oriental mysticism, and other religious traditions. One discovers alternatives to the dominant Western paradigm like feminism and romanticism. One also notices that each of the pools is connected to its neighbours by channels cut into the walls just below the surface of the water, thus allowing the knowledge contained in each pool to flow continuously from one pool to another. Within each pool, still groping around at the bottom, are many individuals who do not appear to need or to want to come up for air. Beside each pool there are other people, like oneself, who felt the need to look up to the light, to rise to the surface, and to search for alternative ways to find the treasure. To one's delight, one discovers that there are treasures in every pool. The air is filled with a glorious light that illumines the pools and causes the treasures to gleam like gems and crystals. One perceives that the diverse cultural traditions of the human family are united by one common source of life and light, and, in discovering that unity and serving the rest of creation, one may fulfill one's potential as a human being, as one individual inextricably linked with the rest of the universe.

¹ Various aspects of the Baha'i vision appear throughout the thesis. The frequency of the appearance of passages from the Baha'i writings is not intended to imply that this thesis is presented as "the Baha'i approach to environmental ethics." However, since this work represents a departure from conventional, "value-free" academic research, the analysis does reflect a filtering process shaped by my understanding of not only the Baha'i teachings but also other theories that influence my personal beliefs. The relevance of the Baha'i Faith to the research undertaken in this thesis is reinforced by the coincidence in its emergence with that of ecology as a recognized scientific concept in the mid-19th century and the common ground shared by both "movements" in many of the themes pursued in this thesis.

Chapter 4 explores one of those pools, that is, environmental ethics, and some of its connecting passages. This pool is massive despite its youth. It has been impossible to explore thoroughly every corner of the pool. It is hoped, however, that by the end of the exercise, the reader will have obtained a clearer picture of the layout of the pool and the nature of its connections to its neighbours. Given the abstract nature of some of the discussion in this section of the thesis, it has been necessary to present the material in a spatial or graphic way. A two-dimensional map organizing the various positions is proposed. The proposed map also offers an opportunity to develop a third (for me, spiritual) dimension beyond the two presented graphically in this thesis.

Following the elaboration of the environmental philosophies set onto the map, six spiritual and moral principles contained in those philosophies are discussed: interdependence and interconnectedness, balance and moderation, and equity and justice. This chapter is a preliminary analysis of the spiritual and moral foundations of a potential global sustainable environmental ethic. Central to the integration of these principles into scientific analysis is the recognition of the inherent harmony between science and religion. In addition to exploring this relationship in more detail, Chapter 5 also expands upon the concept of unity in diversity, discussing how the concept might be used in integrating the diverse approaches to the environment in Western society.

This thesis is a preliminary exploration of a complex field of human inquiry. It also highlights the benefits of interdisciplinary research. This thesis covers many themes that are normally pursued by specialists in theology, philosophy, religion, metaphysics, and other streams in the humanities. By presenting some of these ideas in a geographical context, they receive a different but enlightening treatment, thus contributing to the expansion of knowledge not only in the humanities but also and especially in geography. It is hoped that this initial body of work will be examined and analyzed by others in their own investigations, and that the result will be more committed efforts to mend the rifts in the social, philosophical, and epistemological fabrics of the human experience.

Chapter 1

A View From Here²

Without self-understanding we cannot hope for enduring solutions to environmental problems, which are fundamentally human problems. And human problems, whether they be economic, political, or social, hinge on the psychological pole of motivation, on the values and attitudes that direct energies to goals.

—Yi-Fu Tuan

As we and our land are part of one another, so all who are living as neighbors here, human and plant and animal, are part of one another, and so cannot possibly flourish alone. . . .

—Wendell Berry

The way we stand, you can see we have grown up this way together, out of the same soil, with the same rains, leaning in the same way toward the sun. See how we lean together in the same direction. How the dead limbs of one of us rest in the branches of another. How those branches have grown around the limbs. How the two are inseparable. And if you look you can see the different ways we have taken this place into us. . . . And we are various, and amazing in our variety, and our differences multiply, so that edge after edge of the endlessness of possibility is exposed. You know we have grown this way for years. And to no purpose you can understand. Yet you fail to know we know, and the knowing is in us, how we have grown this way, why these years were not one of them heedless, why we are shaped the way we are, not all straight to your purpose, but to ours. And how we are each purpose, how each cell, how light and soil are in us, how we are in the soil, how we are in the air, how we are both infinitesimal and great and how we are infinitely without any purpose you can see, in the way we stand, each alone, yet none of us separable, none of us beautiful when separate but all exquisite as we stand, each moment heeded in this cycle, no detail unlovely.

—Susan Griffin

Humanity is living in a period of transition, a period during which words such as "alternative," "holistic," and "radical" take on subtle shifts in connotation, when other words and phrases such as "paradigm shift" and "mimesis" become part of the academic vernacular. We live in a time when people seek to penetrate the surface of statements

² This title is derived from a book called *A View from Nowhere*, a concept that implies a more detached, value free approach to inquiry than that used in this thesis. In my opinion, there is no such place as "nowhere."

such as the above epigraphs to find the inherent wisdom in profound thoughts. We live in a time characterized by questioning of centuries old epistemologies and methodologies, when the prevailing institutions and the ideologies that led to their creation are being dissected and found to be fundamentally lacking in understanding of and respect for the nature of life itself. This is not the first time in history such questioning has occurred. Throughout time human beings have constructed and destroyed ideology after ideology, theory after theory in their ongoing quest for knowledge. The most radical previous transformation in Western thought was the Enlightenment.

A major legacy of the Enlightenment and the subsequent Industrial Revolution is a world dominated by a culture that has become increasingly alienated from knowledge of the basic foundations of human existence. Western society has revealed itself to be adept at ignoring or overlooking the fundamental processes that characterize life and humanity's place in creation. Losing sight of the complexity and diversity that are manifested in nature, industrial societies, whether they are based on socialist or capitalist ideologies, have striven for "homogeneity, for unity of thought and behavior" (Berman, 1981, p. 262). Berman continues:

. . . in Western industrial societies each person is enjoined to fit a "national," homogeneous, yet somehow "individualistic" (actually egotistic) stereotype, and the total effect is . . . senseless, crazy, a vast alienation rather than a vast ecology. It is the streamlining of life, whether in a Kansas wheatfield or in this year's graduating class at the University of Peking, which has, in its destruction of diversity, so impoverished human life. (1981, p. 264)

This passage calls up images of the topography and agricultural systems that characterize the American Midwest and of thousands of young people destined to take their places in a society that few Westerners have experienced or could begin to comprehend. These images reflect themes such as landscape-society interactions, rites of passage, and the impact of culture on human behaviour, themes which cultural geographers, sociologists, and anthropologists have explored for nearly two centuries.

This thesis will explore themes in human existence that could hold the key to returning Western society, and indeed all of humanity, to the path that was not taken when “science”/rationality began to take the place of religion/faith as the means to “improve” human civilization. One way in which this scientific/rational approach has manifested itself is in the entrenchment of specialized academic disciplines in the 19th century, a phenomenon that has greatly shaped contemporary Western society.

The effects of academic compartmentalization reveal themselves most tragically in efforts to deal with environmental problems, which are, as Tuan states above, “fundamentally human problems.” There is no such thing as a “natural” disaster anymore. Nor can we label such events as “acts of God,” despite the continued practice of North American insurance companies. We can place responsibility for destruction of the ozone layer and disruptions in the fragile balance of ecosystems at regional levels firmly in the hands of humans. Free will enables us to make decisions that are not due to some Supreme Power’s divine manipulation. We can and do make our own mistakes when we ignore natural laws and limits such as carrying capacity, species diversity, and ecosystem balances. Human ingenuity has created the current state of affairs, the cost of which is, ironically, most profoundly felt by humans. Despite the resources at our disposal, the brilliant endeavours of which we are capable, and the wondrous qualities inherent within us, we are, or at least have been, our own worst enemies.

There is, of course, at least one alternative to this assessment of human nature, and this thesis expresses one such vision. Because my approach is rooted in a particular epistemological context, the following section will outline the principles upon which this work is based. Readers are reminded that the following section is presented merely to make explicit the underlying philosophical framework of the thesis. These fundamentals need to be explored, but readers are not expected to accept or to reconcile these principles with their own beliefs. Rather, they are encouraged to approach this entire exercise with minds open to many possibilities.

The Philosophical and Epistemological Context of the Research *Service*

This thesis is written in the context of an approach to scholarship based on a feeling of service to humanity. My motivations stem from the belief that each and every human being has at least one constructive talent that is needed to assist humanity in its never ending quest for perfection.³ In contemporary Western society, and indeed elsewhere because of the Western hegemony, many do not have the opportunity to achieve their potential. Some of us are relegated to dead-end jobs designed to improve the efficiency of certain institutions or increase the profits of certain corporations without a thorough comprehension of the interconnectedness of all aspects of society and the environment in which it exists and the resultant impacts when human systems are out of step with natural harmonies. We become cogs in wheels of ever-increasing magnitude, power, and detachment from the basic elements necessary for human development beyond mere survival. In many parts of the world, manifold inequities have made even mere survival an impossibility. Western society seems to have focused on economic development and expansion at the expense of social and spiritual well-being. Only small pockets of society seem to be content with the status quo perhaps because they feel that they are profiting from it in some way. Others are detached from Western culture and look beyond its physical, conceptual, and ideological borders to find solutions in other forms of belief and lifestyles. Many people see their professional (and increasingly, personal) lives as meaningless; very few have the opportunity to truly manifest their talents and their

3. As will become more evident in later sections of this thesis, my personal understanding of the nature of human existence is based on a conception of human beings as both physical and spiritual creatures. Although the physical existence is limited to this life, the innermost essence of each individual, the soul, is eternal. Created at conception, it transcends the physical death of the human body on this plane of existence and moves on to the next. The human "quest for perfection" is the development of the spiritual qualities latent within each human being that enable the soul to progress in the next world and those beyond. Like many of the concepts that underlie this research, this belief cannot be tested empirically. It cannot be proved; however, more importantly, in a society still dominated by the "modern" scientific method, it cannot be disproved.

inherent potential.⁴ I believe that unless we have some means to express ourselves in useful, constructive, and meaningful ways that can assist others, our own lives are empty and unfulfilled and the progress of humanity is impeded. Biologist René Dubos expressed a similar thought in this way:

I believe that by the exercise of science as well as of other intellectual pursuits, mankind grows continuously into some higher form, and that in some mysterious way it is in the process of transcending itself. While my own contribution to this upward trend will, of course, be very small, it has an immense value nevertheless, because it becomes part of a spiritual structure that is endlessly emerging from amorphous matter. Science is not only an effort to gather knowledge and develop techniques for achieving mastery over nature. . . . [It] is above all the search for understanding. . . . While it may never be possible to reach absolute truth, nevertheless each one of us adds a small stone to the structure of knowledge, and from all these efforts there emerges a certain grandeur. (1990, p. 220)

Thinking with a Capital "T" Or Combatting Struthianism⁵

The second major reason for this research lies in a perception that many people do not make sufficient use of what is considered by some one of the most impressive manifestations of creation: the human mind.⁶ Especially in the West, many people have been lulled into an almost robotic state of mindless passivity as a result of information overload. The various forms of media that intrude into our lives, the thousands of "time-saving" devices we have invented, the "mad dash" that characterizes our daily urban lifestyle are depersonalizing at best and potentially catastrophic at worst. Many blindly

4. Theodore Roszak refers to the meaninglessness of human technology: "It is not that our technological achievements are all worthless. . . . It is rather that they are *meaningless* in the absence of a transcendent correspondence. . . . They leave ungratified that dimension of the self which reaches out into the world for enduring purpose, undying value. That need is . . . the emotional reflection in mankind of that intentional thrust we can find in the most basic organic stuff, in the purposeful action of the protein matter that toils away in every cell of our being. How can we help but to be creatures in search of value and meaning?" (1973, p. 348)

5. "Struthianism" is a term coined by Mary Clark to describe what could be referred to as the *laissez-faire* approach to problem solving. For Clark, this habit is more accurately visualized as sticking our collective head in the sand. Struthianism derives from *struthios*, the Latin word for ostrich (1989, p. 3).

6. Despite my emphasis on mind as one of humanity's most valuable endowments, I do not glorify it beyond other human gifts as some secular humanists do. Jacob Bronowski, in his insistence on the supremacy of the human mind, appears to ignore other aspects of the human being. He does, however, ask an important question: "Why do those who belittle science always behave as if the mind were the least human of our gifts?" (Bronowski, 1977, p. 260). This question reflects the division that has arisen between science and religion. This thesis represents my attempt to reassert the harmony inherent between them and to reintegrate spiritual concepts into social science.

accept everything that they see on television, hear on the radio, read in the daily newspaper, and witness in their everyday lives. Indeed, they have allowed those everyday lives to perpetuate the myths that are created by the screenwriters, producers, and advertising executives who manufacture a culture that many people mistakenly perceive as a reflection of the way things should be, or would be if they only bought the latest gadget or styled their hair in the newest fashion. Roszak comments on the dependence of "our economy today . . . upon inventing what the hucksters cutely refer to as 'needs people never knew they had' " (1973, p. 392).

There appears to be a growing effort on many fronts to shake people out of their complacency, to urge them to think, *really think*, about their lives, their place in society, their society's place in the world of humanity, and humanity's place in the universe. Many children have an insatiable curiosity about everything around them that compels them to ask the endless stream of questions beginning with "Why" or "How?" At some point, we seem to "outgrow" those kinds of questions. Rather than losing that curiosity, we may simply become conditioned by society to stop voicing the questions, and eventually, even stop formulating them to ourselves.⁷ I believe that these patterns of conditioning are simply human creations, rather than a stage that is predestined. We possess brains and minds for a purpose. Surely, they are meant to be put to constructive use rather than being allowed to wither through lack of use.

The use of one's brain/mind is essential in scientific research but, as will be discussed below, without also employing other faculties with which humans have been provided, the products of one's research may be limited. Not only must we use our brains, but we must also engage our heart, soul, conscience, intuition, and whatever else has been ignored or forgotten by adherents of conventional approaches to scientific inquiry.

7. Cf. "[Science] serves two functions: it fulfills our *innate curiosity* about how things work and, more importantly, it increases our *wisdom* about how to act" (Clark, 1989, p. 21). See page 26.

Independent Investigation of Truth

Not only do human beings possess the capacity to seek answers to life's questions but society must also provide the freedom within which to do so. One of the central principles of the Bahá'í Faith and the principle that is the most essential in any exercise, especially an intellectual one is the independent investigation of reality or truth.

The following passages from talks delivered in the early part of this century by 'Abdu'l-Bahá⁸ offer an insight into the Bahá'í understanding of this principle:

... know ye that God has created in man the power of reason, whereby man is enabled to investigate reality. God has not intended man to imitate blindly his fathers and ancestors. He has endowed him with mind, or the faculty of reasoning, by the exercise of which he is to investigate and discover the truth, and that which he finds real and true he must accept. He must not be an imitator or blind follower of any soul. He must not rely implicitly upon the opinion of any man without investigation; nay, each soul must seek intelligently and independently, arriving at a real conclusion and bound only by that reality. The greatest cause of bereavement and disheartening in the world of humanity is ignorance based upon blind imitation. ('Abdu'l-Bahá, 1982, p. 291)

In the same proportion that the body of man is developing, the spirit of man must be strengthened; and just as his outer perceptions have been quickened, his inner intellectual powers must be sensitized so that he need not rely wholly upon tradition and human precedent. In divine questions we must not depend entirely upon the heritage of tradition and former human experience; nay, rather, we must exercise reason, analyze and logically examine the facts presented so that confidence will be inspired and faith attained. Then and then only the reality of things will be revealed to us. The philosophers of Greece—such as Aristotle, Socrates, Plato, and others—were devoted to the investigation of both natural and spiritual phenomena. In their schools of teaching they discoursed upon the world of nature as well as the supernatural world. . . . Because they were interested in both natural and divine philosophy, furthering the development of the physical world of mankind as well as the intellectual, they rendered praiseworthy service to humanity. This was the reason of the triumph and survival of their teachings and principles. Man should continue both these lines of research and investigation so that all the human virtues, outer and inner, may become possible. (1982, p. 327)

The principle of the independent investigation of truth is not exclusive to the Bahá'í Faith; it is expressed elsewhere by established scientists as well. For instance, Jacob Bronowski writes:

⁸ 'Abdu'l-Bahá, whose title means "Servant of the Glory," was the oldest son of Bahá'u'lláh (the Prophet-Founder of the Bahá'í Faith) and shared his father's imprisonment and exile for over forty years. He was the leader of the Bahá'í Faith after Bahá'u'lláh's death until his own passing in 1921. For more information on his life, see Huddleston, 1976, pp. 163–71.

... the search for the truth imposes a morality on those who share in it and tells them what they ought to do if they are to succeed in finding out what is the case. As soon as science sets what is true, at any cost, it also imposes on those who practice science an obligation of how they ought to behave. Science tells us, quite simply, that we ought to behave in such a way that we can all find out what is true.

We ought to behave in such a way that we can all find out what is true. From this basic principle the whole organization of the scientific community flows. For it means that the body of scientists has to create a code of behavior which shall tame the prejudices, the foibles, and the vanities of individuals for the sake of reaching the truth, not by dictatorial imposition, but by the agreement of free minds. It follows that science gives a special value to some forms of behavior which the everyday world finds tiresome. For example, the everyday world likes people to conform and not to find fault with the accepted beliefs of the past. But scientists assume that the beliefs of the past are not final and that they remain to be corrected by the present and the future. Therefore, science gives particular value to original thinking and to its outspoken expression. (1977, p. 200–201)

The research for this thesis is an attempt to investigate independently the normative foundations of a variety of approaches to the natural environment. The principle of the independent investigation of reality is crucial to my research methodology. As will become more evident as this chapter progresses, the internal or subjective qualities that are inherent in each scientist are necessarily an integral part of the research. Rather than resulting in a “distortion” or “blurring” of the data, they are implicitly part of the scientific process. Only by recognizing and accepting this fact can humanity move beyond the limitations imposed upon scientific inquiry by the reductionist tendencies in the “modern” method as it has been sustained throughout the last three centuries.

Concept of the Creator, Divine Manifestations, and the Role of Religion

An essential principle of this exercise is my personal belief system, the spiritual portion of which is based on the teachings of the Bahá'í Faith. The motivations for this research arise from a worldview that stems from a belief in a Supreme Being, an Omnipotent Creator. This Entity, identified as “God” in the Judeo-Christian tradition, “Alláh” in the Islamic tradition, and a host of other terms in various cultures around the world is viewed

as one and the same throughout human history and culture.⁹ The oneness or unity of God, as it is expressed in the Bahá'í writings, has been manifested throughout history. The essence of God is beyond human capacity to comprehend accurately or completely:

In the Word of God there is . . . unity—the oneness of the Manifestations of God, Abraham, Moses, Jesus Christ, Muhammad, the Báb¹⁰ and Bahá'u'lláh.¹¹ This is a unity divine, heavenly, radiant, merciful—the one reality appearing in its successive Manifestations. . . .¹²

There is also the divine unity or entity, which is sanctified above all concept of humanity. It cannot be comprehended nor conceived because it is infinite reality and cannot become finite. Human minds are incapable of surrounding that reality because all thoughts and conceptions of it are finite, intellectual creations and not the reality of the Divine Being which alone knows itself. ('Abdu'l-Bahá, 1982, p. 192)

Later in this talk given at the Fourth Unitarian Church in Brooklyn, New York in 1912,

'Abdu'l-Bahá explains the limitations of human conceptions of divine reality:

. . . if we form a conception of Divinity as a living, almighty, self-subsisting, eternal Being, this is only a concept apprehended by a human intellectual reality. It would not be the outward, visible reality, which is beyond the power of the human mind to conceive or encompass. We ourselves have an external, visible entity; but even our concept of it is the product of our own brain and limited comprehension. The reality of Divinity is sanctified above this degree of knowing and realization. It has ever been hidden and secluded in its holiness and sanctity above our comprehending. Although it transcends our realization, its lights, bestowals, traces and virtues have become manifest in the realities of the Prophets, even as the sun becomes resplendent in various mirrors. (1982, pp. 192–93)

9 In this thesis, for the sake of simplicity, I will refer to this Entity as God or the Creator. However, the use of these appellations does not imply an acceptance of the images of God that have been used in contemporary human portrayals of God's essence or form. The Bahá'í concept of God is profoundly different from the image of the old white man with a long white beard.

10 The Báb (meaning "Gate" or "Door") foretold the coming of "Him Whom God Shall make Manifest," thus fulfilling a quranic prophecy. His title stems from his station as the Forerunner of Bahá'u'lláh. Born in 1819 as Siyyid 'Alí Muhammad, his ministry lasted from May 23, 1844 until his public execution July 9, 1850. For more information on the life of the Báb, see Huddleston, 1976, and Hatcher and Martin, 1984.

11 The Prophet-Founder of the Bahá'í Faith. He was born into a noble family in 1817, but renounced an inherited government appointment to serve the needy. He became a follower of the Báb and was imprisoned and exiled for his beliefs. In 1863, during his exile from his native Persia, he revealed himself to his followers as the One foretold by the Báb. Following over forty years of imprisonment and exile, during which hundreds of his followers either joined him or spread out to share his teachings with others, he passed away outside the prison city of 'Akká in 1892. For further details, see Huddleston, 1976; Hatcher and Martin, 1984; and Balyuzi, 1980.

12 Bahá'ís also recognize Krishna, Buddha, Zoroaster, and Adam as Prophets of God and include them in this concept of "progressive revelation." The Bahá'í writings indicate that there have been other Manifestations who appeared earlier in human history but that there is no record of them. Adam is identified as the first Prophet for whom there is historical reference. For more information on progressive revelation, see 'Abdu'l-Bahá, 1982, pp. 197–205, 361–70, and Chapter 6 of Hatcher and Martin, 1984.

These concepts of the oneness of God and a succession of divine prophets throughout human history represent a new way for human beings to relate to themselves and the rest of creation. This view of religion offers an alternative to the orthodox, fundamentalist interpretations of many of the subsets of the world's religions by focusing on the original teachings of the Manifestations of God rather than becoming distracted or seduced by human interpretations (and often, misinterpretations) of the divine word. In *Ariadne's Thread*, Mary Clark quotes Erich Fromm, who describes the role of the Manifestations and a conception of divine revelation as follows: "It is the function of the prophet to show reality, to show alternatives and to protest; it is his function to call loudly, to awake man from his customary half-slumber. It is the historical situation which makes prophets, not the wish of some men to be prophets" (1989, p. 182). The Bahá'í view would concur with this interpretation insofar as genuine prophethood is not a role that the Prophets of the past have chosen on a whim. However, what Fromm does not express and which, for Bahá'ís, is essential, is the role of the Creator in the process. It is indeed the "historical situation which makes prophets"; however, those individuals who have become Prophets were chosen as instruments of God's message. During those times in history when the Creator perceived that human beings were being led astray by their own fancies and desires, away from the path toward unity, God bestowed upon selected individuals the wisdom and capacity to bring divine teachings to humanity. The important distinction here is between prophet and Prophet. The legacy of such figures as Moses, Buddha, Muhammad, and Christ is the endurance of their message throughout the centuries. Others like Lao-tzu, Confucius, and many Native American spirits certainly offered spiritual insights into human affairs, provided a source of spiritual education, and have, without a doubt, created their own legacy within the cultures in which they lived or upon which they cast their influence, but their long term impact could never have the sustained effect of the divine Messengers since it does not have the directed power of God behind it.

There have, of course, been common elements in all the religions, the most well-known being the Golden Rule. Every Prophet and many prophets have offered a version of this eternal truth, the most common articulation being "Do unto others as you would have others do unto you." However, as history has shown, divine teachings can be and have been distorted. Humanity has witnessed the effects of religious intolerance and conflict and, in many societies, people have justifiably rejected the institutional *forms* religion has taken through the efforts of misguided leaders. People have also rejected the *substance* of organized religions, losing their faith in all religious teachings and in their divine source. They cite historical evidence of the damage that religion has repeatedly caused throughout the world and throughout history. They refer to conflict in the former Yugoslavia and massacres in India as contemporary examples of the negative effects of religion. The evidence appears to be indisputable. The interpretation of the issue is, however, open to question and not nearly as obvious or discouraging as one might think.

The Bahá'í writings offer a penetrating insight into the decline of religion:

True religion is the source of love and agreement amongst men . . . ; but the people are holding to the counterfeit and imitation, negligent of the reality which unifies; so they are bereft and deprived of the radiance of religion. They follow superstitions inherited from their fathers and ancestors. To such an extent has this prevailed that they have taken away the heavenly light of divine truth and sit in the darkness of imitations and imaginations. ('Abdu'l-Bahá, 1943, p. 238)

One of the central teachings of the Bahá'í Faith is that "religion must be the cause of unity, harmony and agreement among mankind" ('Abdu'l-Bahá, 1943, p. 247). Acknowledging the force that animates religion and the disastrous consequences when that force is misused, 'Abdu'l-Bahá states that if religion "be the cause of discord and hostility, if it leads to separation and creates conflict, the absence of religion would be preferable in the world" (1943, p. 247). One of the beliefs underlying this thesis is that religion in its purest form, free from institutional corruption and dogma, is necessary for human survival as a means of focusing our devotion to our Creator. Ervin Laszlo has written that "the great ideals of the world religions, and the ethics and worldviews of

more recent times embody perennial values, independent of the historical period in which they first appeared. These ideals could and should be reaffirmed, and divorced from the often questionable political practices which were associated with them" (1989, p. 66). If humanity is ever to establish an enduring peace, we need to find a way to unify the world's religions and to reconcile the conflicts among religions and between the religious and secular institutions of society.

Harmony of Science and Religion

This last point introduces another principle crucial to this thesis: the harmony between science and religion. In Chapter 3, I will explore attempts to apply this principle by some geographers in the 19th century. However, for now, I will introduce the rationality behind the concept in more general terms. In *The Arrogance of Humanism*, David Ehrenfeld states, "By concentrating on one part of human nature, reason, at the expense of the other, we do ourselves a disservice. . . . A clever person can use reason to support any course of action that he or she pleases—it takes decent feelings to pick the right one" (1981, p. 46). Since there appears to be irrefutable evidence supporting Ehrenfeld's claim that our reliance on reason at the expense of faith has led us down a perilous path, we might be encouraged to seek alternate visions to change our course. On the one hand, it is apparent that science without an underlying foundation of morality or an impelling motivation based on good will is likely to be mechanistic and dehumanizing. On the other hand, religion without reason leads to superstition and blind imitation.

The Bahá'í writings are clear on this point:

Another cause of dissension and disagreement is the fact that religion has been pronounced at variance with science. Between scientists and the followers of religion there has always been controversy and strife for the reason that the latter have proclaimed religion superior in authority to science and considered scientific announcement opposed to the teachings of religion. Bahá'u'lláh declared that religion is in complete harmony with science and reason. If religious belief and doctrine is at variance with reason, it proceeds from the limited mind of man and not from God; therefore, it is . . . not deserving of attention. . . . How can man believe that which he knows to be opposed to reason? . . . Can the heart accept that which reason denies?

Reason is the first faculty of man, and the religion of God is in harmony with it. ('Abdu'l Bahá, 1982, p. 231)

As will be shown in Chapters 2, 3, and 4, there has been interest in the past and there is now a renewed awareness of the natural harmony between science and religion. The discussion in Chapter 2 will especially offer insights into how the development of the modern scientific method may have impeded the progress of humanity's pursuit of knowledge by sustaining a division between these two human endeavours.

Frustration, Patience, Detachment, and Thinking Like a Mountain

Many people feel despair and frustration at the lack of progress in social change. The apparent failure of "good causes" to do little more than offer band-aid solutions to isolated problems is a large part of the malaise. Despite the frustration associated with such perceptions, these apparent failures are not a reason to relinquish hope. Being an advocate for change requires patience and "active" detachment. One must recognize the limitations in what one can hope to accomplish, emotionally detach oneself from the setbacks, and forge ahead wiser and better prepared for each new hurdle. One must recognize that the process is a slow one, but that in these closing years of the 20th century the pace appears to be accelerating. However, the momentum occurs at all planes along the spectrum. As quickly as positive events such as the dissolution of the Soviet Union, the breakdown of the Berlin Wall, and the abolition of apartheid occur, so do even more horrific events such as the war in what was once Yugoslavia and the failure of the United Nations to protect its own people and Somalis from rebel warlords. These are examples of the escalation of momentous events that form the complex and confusing state of current world affairs. How does one remain simultaneously concerned *and* detached?

One way is to adopt a long-term vision beyond one's own lifetime into the past and into the future to place the current situation into perspective. When we ponder what we know about the proportions of time that have been occupied by the different ages of life,

it is easier to place the current state of the world in context. Human beings have been around for about one dime's worth of time in a million dollar jackpot. "Thinking like a mountain,"¹³ setting oneself outside of one's personal lifetime and even humanity's existence, puts our contribution to life as we know it in a very different light from the anthropocentric pretensions of those thinkers over the centuries who have asserted humanity's control over nature. One educational, fictional account of humanity's ability or inability to control the environment is John Wyndham's novel *Web*, in which newcomers to a remote island are forced to deal with the indigenous inhabitants, and find to their surprise that, despite self-confidence in their technological wizardry and ability to adapt to any situation, the indigenous population, a special type of spider, reigns supreme. The ability of humans to transcend certain laws of nature and to "dominate" their environment does not render them invulnerable to nature. Wyndham's novel reinforces the power latent within nature to protect itself from the ravages perpetrated by human beings who mistakenly or wickedly exceed their place. The planet's non human inhabitants survived for millions of years without the most recent introduction to creation. Despite the wondrous qualities manifested by human beings and the feats of altruism and compassion of which human beings are capable, one can only trust that humanity's tenure will not be cut short by a catastrophe of its own creation. Others have echoed this view:

The human species in overall perspective has very little value for other species in nature. The whole biosphere today would in fact be much healthier if evolution had not led to the appearance of human beings. If our species were to disappear under circumstances that did not poison the atmosphere or destroy numerous other species, we could expect a gradual recovery of the biosphere from our depredation.

But human experience has introduced into this planet dimensions of experience that are, as far as we know, impossible for other species. *The qualities of enjoyment characteristic of human relationships and creativity have unique intrinsic worth. That we are fully part of nature does not undercut the distinctiveness of the values we have realized.* (Cobb, 1988, pp. 109–10; emphasis added)

13. This phrase was originally used by Aldo Leopold to reflect a nonanthropocentric ethic of connectedness with nonhuman nature. As will be seen in Chapter 4, the exercise of "thinking" like a mountain "sets for us a dreadful anthropocentric trap." For more elaboration on this theme, see the section on ecological humanism in Chapter 4 or Skolimowski, 1984, p. 284. For this discussion, I am accepting the reverential meaning of the phrase as I believe Leopold intended it to be used, and applying it in the context described above.

Keeping the Faith

Accompanying the general malaise in society mentioned earlier is a feeling of pessimism about the future, a loss of faith in the ability of the human species to reverse the apparent path towards self-destruction upon which we seem to have set ourselves. This pessimism is often labeled realism, perceived as an unclouded view of the way things really are, always have been, and always will be because "it's human nature." At the same time, an unshakeable faith in the inherent capacity for good within each individual is often viewed as idealistic naiveté.¹⁴ This so-called "realistic" view of humanity can be paralyzing. When people lose hope, they lose the will to act. When they lose the will to act, the catalysts that lead to profound or even small-scale changes are lost. And a static society is a dead society, spiritually, emotionally, intellectually, and ultimately, physically. It appears that Western society has gradually been spiritually dying for centuries. Our emotional malaise is most profoundly felt in a declining quality in interpersonal interactions within and outside our families and communities. Intellectually, the malaise has gripped our educational institutions from primary to graduate schools, and in our economic and political institutions. And physically, not only are we increasingly tested in meeting human health care needs but we are also both directly and indirectly responsible for the degradation in the health of the natural environment.

Despite this gloomy assessment, our society is not dead; there are millions of "points of light" out there. Each individual has the potential to be a beacon in the darkness. We just need to find and to foster the goodness in each person we encounter, focusing on and drawing inspiration from the positive qualities each possesses, ignoring and suppressing the negatives. Reliance on and drawing strength from each individual will enable us ultimately to withstand any challenge. As a species, we are faced with one set of facts

¹⁴ See Laszlo, 1989 for a similar assessment of the current state of society and a positive vision for humanity's future

regarding the problems currently plaguing the planet. As individuals, we have the option of beginning each new day as one of those beacons of light or as part of the darkness:

Happiness is contagious. For this reason its expression is a social service and almost a duty. . . . Since optimism and cheerful spirits are indispensable to the mental health of technological societies, the most useful people may turn out to be those who, through empathy and happiness, have the gift of spreading a spirit of good will.

We are still on the way, renewing and enriching ourselves by moving on to new places and experiences. Wherever human beings are involved, social adaptations make it certain that *trend is not destiny*.

Life starts anew, for all of us with each sunrise. (Dubos, 1990, p. 50; emphasis added)

Learning from the Past

The astonishing thing about our deepened understanding of reality over the last four or five decades is the degree to which it confirms and reinforces so many of the older moral insights of man. The philosophers told us we were one, part of a greater unity which transcends our local drives and needs. They told us that all living things are held together in a most intricate web of interdependence. They told us that aggression and violence, blindly breaking down the delicate relationships of existence could lead to destruction and death. These were . . . intuitions drawn in the main from the study of human societies and behavior. What we now learn is that they were factual descriptions of the way in which our universe actually works. (Ward and Dubos, 1972, p. 44)

Here in the West, we are beginning to realize what many cultures have recognized for centuries and never lost—that we are part of nature despite our ability to adapt or to circumvent some natural laws and that we must limit our alteration of the natural balances if they are not to be destroyed. Perhaps we, as a species, can be likened to one stereotypical human being who begins life in ignorance and progresses through different stages of life, making mistakes and, through the acquisition of knowledge and understanding of basic truths, gains maturity until, as an adult, that being is an active, productive, but still inquisitive creature, continually searching for answers. As a child, that being has less control over emotional outbursts, is often inclined to resolve disputes through violent means, and operates in a decidedly egocentric fashion. As an adolescent, bigger, stronger, and equipped with more knowledge, that being has the potential to be uncontrollably self-destructive. The adolescent, despite possessing a vast amount of

knowledge, has not yet acquired *wisdom*,¹⁵ and therefore, is vulnerable to unhealthy and potentially lethal influences, both internal and external.

Humanity could be described as passing through this adolescent phase for the last several centuries and currently being at the threshold of maturity. Although an elaboration of the vast body of evidence supporting such a claim is beyond the scope of this work, one issue central to this thesis yields a clue to humanity's impending maturity: increasing calls for and efforts at establishing interdisciplinary cooperation and collaboration in academic institutions and scholarship.¹⁶ One scholar addresses the inadequacies of the dominant scientific paradigm in the following way:

It is notorious that many of our most important questions cannot be dealt with within the confines of any existing science. For that reason they are likely to be ignored, or else misleadingly treated as if they did belong to some one of the disciplines. Occasionally interdisciplinary teams are organized to deal with such problems. But the results are only modestly encouraging. The questions need to be treated in their integrity, not as the sum of questions formulated according to the traditions of several discrete disciplines. . . .

The ecological worldview tells us that our initial mistake was the supposition that we could isolate some elements from the whole and learn the truth about them in this abstraction. A conceptuality developed to deal with them in abstraction from their embedment in the whole will not accurately describe them in that embedment. . . . Only a knowledge that is ecologically related to all knowledge is appropriate to a reality that is ecologically interconnected. The implications run markedly counter to most current trends. (Cobb, 1988, p. 111)

This thesis is the product of an exploration that has surveyed parts of geography, psychology, sociology, anthropology, philosophy, religion, and literature. The result is an attempt to build bridges between some of these fields, making explicit the inherent but often subtle connections that interweave the social sciences and the humanities. The areas that have received the most treatment in the preparation of this thesis are cultural geography and moral philosophy, with many of the connections between these two fields made through environmental ethics.

¹⁵ See note 7 above. Skolimowski defines wisdom as "the integration of knowledge with values" (1981, p. 17). Skolimowski's reintegration of values and knowledge is a fundamental tenet in his concept of ecological humanism, which will be discussed in Chapter 4. See also Berry, 1988, p. 48.

¹⁶ For recent articulations of this theme, see Toulmin, 1982; Botkin, 1989; Daly and Cobb, 1989; Talbot, 1989; Gould, 1991a and 1992; and Pierce, 1992.

Global Consciousness

Another way of looking at the gradual maturation of humanity is in the expanding focus of individual and collective self-awareness. In prehistoric times, human beings (we assume) had little knowledge of themselves, let alone the nature of the world and the beings that inhabit it. Their actions were primarily driven by instincts that were not understood by the individuals themselves. Their behaviour was essentially "animalistic." As they acquired knowledge, their awareness of themselves and the world around them expanded. They began to make connections, linking certain activities and events in a causal fashion. Moving forward in history to the dawn of the written record, the sense of awareness had expanded to include not only concepts of space and relations with those in their immediate circle but also to a notion of the passage of time. People recorded significant events in their lives. Their geographical sense included their immediate family and the extended family that comprised the tribe and viewed anyone or anything else as a potential enemy, source of food, or resource to be used to facilitate survival. As more time passed, the concepts of territory and acceptance of others expanded to include family and neighbours, until the concept of "us" comprised hundreds, and later, thousands of individuals and the physical boundaries (unbreachable mountain chains, impassable deserts, or unnavigable bodies of water) stretched beyond the horizon. Nationhood was the next development, expanding our geographical awareness to new limits and our collective consciousness to new heights and breadths of abstraction. In these closing years of the century, despite the birthpangs experienced as new nations are born, many people recognize that the next step in humanity's expanding sense of awareness will embrace a global vision of humanity as one family and the entire planet and its resources as our home and the basic elements of our sustenance. Our geographical awareness is gradually expanding to the limits of our planetary home and beyond.¹⁷

17. Jeremy Rifkin cites a 1988 Gallup survey on the American public's geographic and biospheric literacy. Respondents performed very poorly on the geographic questions (e.g., only 57% could identify England on a map; 1 in 7 could not find the United States), but were more familiar with biospheric issues.

One such expression is "World Citizenship: A Global Ethic for Sustainable Development," which responds to the perception at UNCED of "the need for a global ethic to vitalize Agenda 21." It offers the concept of world citizenship as a unifying term that encompasses "the constellation of principles, values, attitudes and behaviors that the peoples of the world must embrace if sustainable development is to be realized." In this view, world citizenship

begins with an acceptance of the oneness of the human family and the interconnectedness of the nations of "the earth, our home." While it encourages a sane and legitimate patriotism, it also insists upon a wider loyalty, a love of humanity as a whole. . . . World citizenship encompasses the principles of social and economic justice, both within and between nations; non-adversarial decision-making at all levels of society; equality of the sexes; racial, ethnic, national and religious harmony; and the willingness to sacrifice for the common good. (Bahá'í International Community [BIC], 1993)

The document offers practical proposals for the implementation of the concept through education programs in schools all over the world. Referring to the opening words in the original UN Charter, the document draws attention to the concept's implicit and explicit inclusion in numerous United Nations documents and its application by diverse NGOs, social movements, entertainers and artists all over the world. "World Citizenship" also highlights the importance of teaching the principle of unity in diversity as the "key" to building the strength and wealth of nations and the entire global community (BIC, 1993).

The knowledge that has built up over the centuries in the diverse cultures inhabiting the planet forms the foundation for our global vision of sustainable living within the carrying capacity of the planet's resources. We do not need to devise new formulas for a global environmental ethic. Wisdom regarding the interdependent relationship between human beings and the rest of creation can be found in numerous cultures around the world. The principles upon which ecologically sustainable practices are based merely need to be freed from some aspects of Western ideology.

such as CFC impact on the ozone layer, acid rain, and the global effects of deforestation in Brazil. Rifkin laments the finding that "adult Americans appear far less geographically literate than they were forty years ago," but is encouraged by "the awareness and sophistication shown in relation to issues affecting the biosphere" (1991, pp. 262-63).

A New Paradigm

The approach to science that emerged from the Enlightenment adheres to a set of principles upon which are based guidelines for valid and reliable scientific research:

- 1) there are universal general laws that explain human beings and nature that can be discovered through detached observation of empirical data;
- 2) the more tightly focused is one's observation of a phenomenon, the more accurate/valid a picture one obtains of its purpose and effects;
- 3) the study of the smallest particles, which form the "building blocks" of the universe, enables the scientist to formulate theories to explain "reality";
- 4) theories based on the general laws and observations of the building blocks are testable by using objective and detached methods of observation; and
- 5) truly objective science is value-free.¹⁸

There is a growing body of opinion that refutes the implied permanence and universality of these principles and proposes alternative methodologies to acquire knowledge and understanding of the world. This study represents one small part of that literature. As applicable as the above principles might be in the natural sciences, in the humanities and social sciences, procedures are and must be fundamentally different.¹⁹ Perpetuating ignorance of the role of the observer in scientific observation is misguided, and assuming that "objective" observation can be value-free is naive.

The paradigm shift that is underway in science is not occurring in a vacuum. All of human society is being transformed. Especially here in the West, many people are developing an increased sense of self-awareness, which is translating into action on a number of fronts: environmental issues, social and humanitarian causes, and alternatives to the prevailing political and economic systems. Recognizing the fundamental flaws in the way liberal democracy, communism, and capitalism have been applied in modern society, many people are deliberately opting out of the mainstream, involving themselves

18. These principles, which are perceived by diverse critics of the "modern" scientific method as its "ideals," are specifically synthesized from Lincoln and Guba, 1985.

19. However, rigid attachment to this method is not relevant for the natural sciences either. All human inquiry must be informed by an awareness of and respect for the role, values, and beliefs of the researcher.

in social movements that represent the grassroots application of a new paradigm, a new worldview that places spiritual and moral principles ahead of power and materialism.

The effects of the application of changed values in society in general and science in particular are emerging as the strongest foundations for scientific response to contemporary crises affecting humanity and its home. As will be discussed next, there are strong epistemological foundations for methods of inquiry that are markedly different from the "modern scientific method."

Methodology

Lincoln and Guba (1985) comment on the decline of the relevance of the "positivistic" paradigm and the "modern" scientific method: "Cracks have begun to appear in science's magnificent edifice as new 'facts' are uncovered with which the old paradigm cannot deal or explain. Normal science in the Kuhnian sense is becoming more and more difficult to sustain. Serious challenges are being mounted from the perspective of alternative paradigms that suggest new and different answers" (p. 7).

They outline four categories of truth: (1) empirical, that which can be tested by objective observations of "nature"; (2) logical, that which is consistent with some other claim thought to be logically true; (3) ethical, that which conforms to some accepted moral or professional standard of conduct; and (4) metaphysical, that which must be accepted at face value because it cannot be tested against any external norm such as those used in the other three categories (Lincoln and Guba, 1985, p. 14). Metaphysical truths "represent the ultimate benchmarks against which everything else is tested, for if there were something more fundamental against which a test might be made, then that more fundamental entity would become the basic belief whose truth must be taken for granted" (p. 15). Acceptance of the validity of such a statement is in itself a departure from the Western secular paradigm and the current wave of post-modern plurality and extreme relativism, in which there are as many valid viewpoints as there are people to express

them. The concept of universal or absolute truths even existing, let alone being a benchmark for human behaviour and against which all other truths are measured, is seen as heresy by those who critique the Western ideological hegemony. Universal truths are considered to represent the ideals of the social and political elite, neglecting or persecuting the masses. However, as mentioned above, my worldview allows for universal truths that are applicable to every human being regardless of their ethnic background, race, economic status, age, sex, political or religious persuasion. These truths are universally applicable to all human beings simply because they are human. However, there are certain time- and context-specific variables that must be taken into consideration in any “scientific” study of human beings and their activities.

Lincoln and Guba (1985, p. 37) distinguish between a stereotypical characterization of positivism and their proposed naturalist approach to scientific inquiry as follows:

Axioms about	Positivist Paradigm	Naturalist Paradigm
The nature of reality	Reality is single, tangible, and fragmentable	Realities are multiple, constructed, and holistic
The relationship of knower to the known	Knower and known are independent, a dualism	Knower and known are interactive, inseparable
The possibility of generalization	Time- and context-free generalizations (nomothetic statements) are possible	Only time- and context-bound working hypotheses (idiographic statements) are possible
The possibility of causal linkages	There are real causes, temporally precedent to or simultaneous with their effects.	All entities are in a state of mutual simultaneous shaping, so that it is impossible to distinguish causes and effects
The role of values	Inquiry is value-free	Inquiry is value-bound

These axioms are not necessarily a *radical* change from the way much of science is being practiced in the second half of the 20th century and, as will be seen in the next two chapters, many scientists in earlier times also seemed to show, at least on an individual basis, many of the principles of naturalistic inquiry. Many contemporary celebrated scientists such as Fritjof Capra, Ervin Laszlo, E. F. Schumacher, and others also seem to embrace many values that represent a departure from stereotypical views of the prevailing

scientific paradigm. Although the naturalist approach is explicitly presented by Lincoln and Guba as being particularly suited to behavioural research in the social sciences, especially that directly involving human subjects, there are compelling reasons that it be applied as a framework for methodology in this thesis.

First, the five axioms of the naturalistic approach are more in harmony with my own views than those offered by Lincoln and Guba as representing the positivist paradigm:

1) My perceptions of the world, and especially of nature and human interactions with the rest of creation have coalesced into a belief in the interdependence, interconnectedness, complexity, and diversity of the world:

2) Therefore, anyone studying any one or several aspects of the world is as connected to the subject(s) of study as any other interacting components. Human beings cannot separate themselves from the subjects of their observation, at least not totally:

3) As mentioned above, there are certain time- and context-specific variables that render each situation significant in its own right. Although I believe there are universal spiritual or moral principles upon which all human activity should be based, the appropriate and constructive application of those principles is highly dependent on the specifics involved;

4) In my view, the only "real" causal relationship is that associated with the Divine, that is, the direct relationship between the Creator and the creation. All other relationships are interactive, involving intricate layerings of reactive and proactive processes, resulting in chicken-and-egg kinds of questions;

5) If each of the preceding axioms is valid, then neutral, value free, or totally objective observation is impossible. The observer is intimately involved, whether he or she is aware of it or not, in the process of observation and therefore, has a direct and relevant impact on the process. Adopting this viewpoint is liberating, especially for those involved in the social sciences, where one's subject is often equally capable of observing the observer. It is absolutely essential, then, when conducting research from this

perspective, to state explicitly at the outset those principles and factors that have led to the initiation of the study and how those factors shape the research process and its outcome.

Second, there are still very few alternative methodologies to those accepted by “traditional” science. New conceptualizations of “reality” are certainly gaining ascendancy and represent essential developments in the growing body of scientific knowledge. Naturalistic inquiry is one methodology that is applicable to a wide range of academic disciplines. Application of some of the principles of naturalistic inquiry in the present integrative study serves to expand the relevance of its underlying principles, thus assisting constructively in the movement toward a more holistic approach to understanding and explaining the world and its inhabitants.

Summary

This chapter has articulated many of the principles underlying the research undertaken for this thesis. In some cases, they are expressions of my personal approach to life and scholarship; in others, they are inspired by more broadly conceived and accepted ideologies. The following is an overview of the principles presented above:

- my personal spiritual and moral principles motivate me to put my talents to some constructive use in service to humanity;
- each and every human being possesses talents and capacities that are needed for the progress of society, and such progress is impeded when these talents are suppressed;
- my perceptions of the current state of Western society impel me to encourage others to really think about and to question the status quo;
- each and every human being has the capacity to engage in his or her own independent search for truth and investigation of reality and should not *blindly* accept pronouncements by others;
- there is one, omnipotent, all-encompassing, supreme Creator who is common to all the world’s great religions;
- religion is progressive throughout history, revealing the same divine truths (such as the Golden Rule) over and over again through different Manifestations of God;
- the basic essence of each religion is in harmony with all others since they all come from the same Source, and therefore, human fallibility and misconceptions, rather than flaws in the divine messages themselves, are at the root of religious prejudice and intolerance;

- there is an inherent harmony between science and religion, and over-reliance on one at the expense of the other leads to blind imitation and superstition on the one hand, and mechanistic materialism and loss of sensitivity on the other;
- human beings are organically interconnected and interdependent with the rest of creation such that an impact in one area of the planet has direct and indirect effects elsewhere;
- remaining committed to a positive vision for social change requires one to be patient, to be emotionally detached without being insensitive, and to place one's current time in history in a greater context, whilst maintaining faith in each individual's inherent capacity to be a constructive part of that vision for change;
- humanity must learn from its mistakes and revive certain traditional visions that have proved useful even if now they seem "old-fashioned";
- humanity may be on the threshold of achieving collective maturity, a stage in its development manifested in an increasing sense of global consciousness;
- rather than remaining rigidly attached to inadequate conceptions, a new paradigm appears to be needed to deal with and to provide the framework for studying a world that is rapidly changing.

The next chapter describes the development of human attitudes toward nature to set the historical context for the thesis. Some of the discussion takes on a narrative form, emphasizing the fact that the individuals discussed were living human beings, not just names in a history text. The discussion is by no means comprehensive. Such a task is far beyond the constraints imposed upon the production of a graduate thesis. It does, however, highlight the most important periods and themes in Western history that are relevant to the current situation.

Chapter 2

From Greece to Wisconsin 3000 Years of Environmental Thought

For since the creation of the world God's invisible qualities—his eternal power and divine nature—have been clearly seen, being understood from what has been made, so that men are without any excuse.

— Romans 1:20

... the nature of matters such as prayer, religion, and the like is most evident at moments of *change*—at moments of what the Buddhists call Enlightenment. And while Enlightenment may involve many sorts of experience, I think it important here to notice how often Enlightenment is a sudden realization of the biological nature of the world in which we live. It is a sudden discovery or realization of *life*.

— Gregory Bateson

There is a sharp contrast between ancient and modern literature on the modifications of the earth by human agency. If the surviving works from the ancient world are representative, the contrast is a measure not only of the vast increase in the amount and rate of change in modern times, but also of an awareness of change, accumulating in the Middle Ages, advancing rapidly in the seventeenth, eighteenth, and nineteenth centuries, rising to a crescendo in our own times, and for which we are still seeking explanations that rise above description, technical solutions, and naïve faith in science.

— Clarence Glacken

Introduction

This chapter presents some of the more significant aspects of the development of Western environmental thought. Some themes initially expressed in specific time periods have transcended the contexts in which they were born; others are firmly rooted in and associated with a particular time and place. The most profound impact on contemporary Western thought has come from the period known as the Enlightenment and the Scientific Revolution. However, images and themes from other periods are reappearing as environmentalists and other citizens concerned with humanity's devastating impact on the

natural environment seek solutions to current problems. The survey begins with a brief overview of Western civilization's birthplace.

The Wisdom of the Ancients

In *Traces on the Rhodian Shore*, Clarence Glacken roots the emergence of contemporary attitudes to the natural environment in the Hellenistic age (1967, pp. 18–33). He identifies ancient sources for a conception of the earth “as an orderly harmonious whole, fashioned either for man himself or, less anthropocentrically, for the sake of all life . . .” and suggests that that organic view was established long before Greek civilization (1967, p. 36). Glacken examines the works of ancient thinkers such as Anaxagoras, Aristotle, Cicero, Democritus, Diogenes, Herodotus, Lucretius, Parmenides, Plato, Pliny, Strabo, Theophrastus, and Xenophon and summarizes his discussion of ancient Greek thought:

The speculations of the ancient thinkers regarding the nature of the cosmos and of the earth as part of it, the role of the demiurge, gods, or of Providence—however the guiding principle or agent was defined—produced a conception of the earth, based on philosophical speculation and everyday observation, which had lasting effects on Western geographic thought. Whether the earth was conceived of as a product of a divine artisan with a plan, or, as with Plotinus, as an emanation from Nous, itself an emanation of the One, the principle of balance, harmony, and order in nature was not only acknowledged but enshrined, even before the reinforcements of Judeo-Christian theology, as one of the great interpretations of the role of the earth in human destiny. (1967, p. 79)

Glacken identifies three types of ancient written observations of human modifications of the earth: (1) general descriptions that reveal an awareness of human impacts on the physical geography of a region; (2) more specific but scattered remarks on plants, agriculture, real estate, stock raising, and grazing; and (3) more philosophical statements that form the body of ancient metaphysical literature (1967, p. 119). Many of these metaphysical expressions have reappeared throughout history, finding a place in contemporary philosophies such as deep ecology and other forms of environmentalism.

Glacken perceives two divergent ideas in ancient views of human beings and nature: the influence of the environment on human beings, and their ability to change it for their

own uses. The first idea derives from perceptions of "design" in the natural system, the different climates of the earth, and the different creatures that live in and adapt to them. The second idea derives from the perception of humans being at the top of some natural hierarchy, thus, receiving divine power to change nature and even, through art and invention, to improve it (1967, pp. 147-48). "Man's environments may be those of art the towns and cities, centuriation, clearings, irrigation works, farming and viticulture but they are really products of his divinely endowed intelligence; his inventions, tools, and techniques spring from a higher creative source as he improves and brings the pristine earth to a finished state" (p. 147). Glacken elaborates on the ancient feeling that

the idea of a design with all parts well in place and adapted to one another in an all-embracing harmony implied stability and permanence; nature and the human activity within it were a great mosaic, full of life and vigor, conflict and beauty, its harmony persisting among the myriads of individual permutations, an underlying stability.

Since classical times, this conception of a designed earth has been but a part of a wider teleology and a philosophy of final causes, but one should not forget that it is the beauty, the utility, the productivity of nature on earth that . . . provided convincing evidence of purpose in the creation, and in turn a traditional proof for the existence of God. . . . It owes its force and its influence to its all-embracing character. . . . (p. 148)

Glacken also perceives this "all-embracing character" as a major factor in the failure of the vision to sustain itself continuously throughout history. Critics have challenged this "all-embracing" view by citing aspects of human existence or natural events that do not seem to fit into some benevolent, ordered design. Secular humanists cite devastating "natural" catastrophes that kill thousands if not millions of "innocent" people as evidence either of an unforgiving, merciless force or of the non existence of a benevolent Creator.

Others also root their discussion in ancient Greek and Roman thought. Hargrove (1989) discusses the works of Greek philosophers such as Thales, Anaximander, Parmenides, Plato, and Aristotle to discover the roots of thought and language and their influence on the writing of the Bible. Hargrove, like Glacken, develops an argument by examining several ancient Greek philosophers and focusing on the history of the Platonic and Socratic traditions that led eventually to the Scientific Revolution. Essentially,

Hargrove argues that “Greek philosophers approached natural phenomena in a way that (1) prevented the development of an ecological perspective, (2) discouraged the aesthetic appreciation of the natural world, and (3) promoted a conception of reality that made the idea of nature preservation conceptually difficult, if not impossible” (1989, p. 21).

Toulmin differs from Hargrove’s interpretation of ancient thought, arguing that there were indeed those who believed strongly in the inherent harmony between human beings and nature and who represented

the last period in Western history when humanity and the rest of nature were clearly thought of as complementary elements with a single overall scheme, or cosmos. . . . The Stoic philosophy . . . taught its adherents to look for the sources of inner, human order and rationality in the external world of nature, and exhorted them to live in harmony with nature. By giving their lives a *logos* that fitted harmoniously the *logos* of nature, they could—as far as was practicable for a human being—avoid being exposed to natural afflictions, and so achieve both personal tranquillity . . . and also good-spiritedness. . . . (1982, pp. 261–62; see also Merchant, 1980, pp. 23–24)

In *Discordant Harmonies*, Daniel Botkin perceives two themes in ancient thought that informed the writings of philosophers such as Aristotle and Plato, Lucretius and Cicero.²⁰ Of these four, Cicero was the most explicit in seeking a source for what was perceived as an ordered universe with each creature especially suited to its own task and purpose for creation: “For whom then shall we say the world was made? Surely for those living creatures who are endowed with reason. . . . For reason is the highest attribute of all. We may therefore well believe that the world and everything in it has been created for the gods and for mankind” (quoted by Botkin, 1990, p. 87; see also Glacken, 1956, p. 72). In this view, Cicero sides with Aristotle, who added to Plato’s conception of nature as ordered and beautiful the idea that nature was designed to meet humanity’s needs.²¹ According to Glacken, Plato “seems to be the first to see [creation of the

20 Botkin actually follows three themes in his discussion of the roots of contemporary attitudes toward the natural environment—nature as divinely ordered, an organic view of nature, and a mechanical view of nature (1990). The last approach does not appear in human history until after the Renaissance.

21 Glacken’s interpretation of the distinction between Plato’s and Aristotle’s views of nature rests on the role of consciousness. Whereas Plato perceived a conscious force in the universe, nature being a result of this divine artisan, and humans being co-artisans, Aristotle’s conception was of nature as unconsciously striving for some ultimate Good, as the artisan itself and more powerful than humans. His was an anthropocentric view of purpose in nature, that all animals are made for the sake of humans, and

cosmos] as the work of an intelligent, good, reasoning, and divine artisan" (1967, p. 45). In *Timaeus*, Plato expresses the idea that "we live in a world full of the richness, fullness, and variety of life owing to the non-envying nature of the divine artisan" (Glacken, 1967, p. 46). This concept of God as a benevolent and divine artisan remained virtually unchallenged for approximately two thousand years, until Darwin's *Origin of Species*.

However, there were those in ancient Greece and Rome who took an opposing stance. Lucretius, who is seen as one of the first and most important proponents of an organic view of the earth, said that there were far too many things wrong with the world for it to come from a God. Essentially, the earth could not possibly have been made for people because there are too many natural enemies, human beings are too vulnerable to natural forces, and, therefore, animals are better off than people. Lucretius perceived the earth as going through stages, just as a person does, with change as an inevitable process leading ultimately to decay and death (Botkin, 1990, pp. 94-95). This view was later reinforced by some interpretations of Christian theology through the use of biblical allegories. Humanity's "fall from grace" was viewed as an explanation for disasters such as floods and disease.

These two opposing viewpoints, expressed over two thousand years ago, represent the crux of the contemporary environmental debate. Botkin summarizes the conflict:

In every century, there have been those who shared with Lucretius a skepticism about the perfection of nature, the design of nature, and the purpose for that design. But throughout the history of the West, one of the dominant themes about nature has been the belief that the universe, the solar system, and the Earth are incredibly well suited to the requirements of life, so well suited as to exceed the likelihood of mere chance. Throughout most of Western history, this belief led to another: that the design of the universe must be the result of some purpose and purposeful creation and is necessarily a realization of a divine order. In the twentieth century, these ideas became more complex, and the simple central belief in a divine order became obscured. (p. 88)

that interrelationships in nature are "directly related to the needs and uses of man" (1967, p. 48). This is the foundation for many contemporary secular and anthropocentric approaches to nature.

22. Botkin then examines the role of "modern" scientific thought and observation, i.e., looking only at what is, not at why it is: "Although in the modern era and especially in the twentieth century, the role of science has been clearly differentiated from the roles of religion and metaphysics, the observations of modern science have reinforced the ancient idea of a wonderfully ordered universe and therefore the theme of nature as divine order" (1990, p. 88).

In the Beginning . . .

One of the most widely cited works that has addressed the historical roots of environmental thought was a presentation by historian Lynn White, Jr. to the American Association for the Advancement of Science in 1967. In his lecture, "The Historical Roots of Our Ecologic Crisis," White stated that the apparent loss of reverence for and desecration of nature by modern society was based on the first chapter of Genesis in which God gives human beings instructions to "Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion . . . over every living thing that moveth upon the earth" (Gen 1:28). According to White, "what people do to their ecology depends on what they think about themselves in relation to things around them. Human ecology is deeply conditioned by beliefs about our nature and destiny—that is, by religion"²³ (White, 1973, p. 24). Following a documentation of how Western society has been influenced by this biblical teaching, White roots the solution to the present crisis in the adoption of a more spiritual approach to nature and proposes St. Francis of Assisi (1182–1226) as the patron saint of ecologists. Glacken's discussion of St. Francis also highlights the reverence for the rest of God's creation that was promoted by the Franciscan order. In his writings and lifestyle, St. Francis manifested a "brotherly" attitude towards all creatures, referring to the elements as Sir Brother Sun, Brother Wind, Sister Water, Brother Fire, and Sister Mother Earth. "To St. Francis living things might be symbols, but they were placed on earth for God's own purposes (not for man's), and they, like man, praise God" (Glacken, 1967, p. 216). The Franciscan view was explicitly anti-anthropocentric, thus offering deep ecologists common ground from early

23 There have, of course, been several societies in modern times that have been influenced by non-religious ideology, the most profound and devastating being the former Soviet Union, Nazi Germany, and fascist Italy. If a broader definition of religion that extends beyond an individual's beliefs in a "divine" or cosmic force and includes any overarching ideological influence is used, then communism and fascism can be described as religions of a sort. Marx's philosophical vision was comprised of many of the same components that are manifested by religion, and in practice, the pure essence of Marxism has been distorted by many of its practitioners, a phenomenon from which religion is not immune. The complexity of religious and ideological influence and their psychological and spiritual impact on human beings prohibits more than an acknowledgement here of the assumption that, given the context of White's remarks, his use of the term "religion" can be accepted in its conventional sense.

European history. The reverential attitude toward nature manifested by Franciscan monks in the 13th century was, to White, a model that humanity should follow: "More science and technology are not going to get us out of the present ecological crisis until we find a new religion, or rethink our old one" (White, 1973, p. 28).

As attractive as White's call for reverence to nature might have been, several academics have disagreed with some of his interpretations and conclusions.²⁴ René Dubos offers his "scientific understanding of the sacred relationships that link mankind to all the physical and living attributes of the earth" (1973, p. 44). He disputes White's interpretation of the roots of the ecological crisis, addressing the contemporary "failure to differentiate between the use of scientific technology as a kind of modern magic and [what Dubos calls] modern religion, namely, knowledge as it related to man's place in the universe and, especially, his relation to the earth" (1973, p. 44).²⁵ Dubos indicates that in Chapter Two of Genesis, Adam is placed in the garden of Eden "to dress it and to keep it" (Gen. 2:15). This notion of "dressing" and "keeping" the earth implies an active stewardship or guardianship of nature rather than its being simply a focus of worship.

24. Geographer David Pepper summarizes his critique by dismissing White's argument as not able to "withstand close scrutiny" (1984, pp. 44–46) and by accepting Glacken's characterization of the debate: "In the period roughly from the end of the fifteenth until the end of the seventeenth century one sees ideas of man as a controller of nature beginning to crystallize, along more modern lines. It is in the thought of this period (not the commands of God in Genesis to have dominion over nature . . .) that there begins a unique formulation of Western thought, marking itself off from the other great traditions, such as the Indian and the Chinese, which also are concerned with the relationship of man to nature. This awareness of man's power greatly increases in the eighteenth century. . . . It increases even more dramatically in the nineteenth century with the host of new ideas and interpretations, while in the twentieth, Western man has attained a breathtaking anthropocentrism, based on the power over nature, unmatched by anything in the past" (Glacken, 1967, p. 494). As will be seen in the rest of this chapter, Glacken's interpretation of the historical evidence is certainly valid; however, there is also evidence for including biblical scripture in the historical record and the development of environmental thought. See also Fox, 1981, pp. 359–61; Russell, 1985, pp. 228–36; Hargrove, 1986, pp. *iii–viii*, and Ayers, 1986, pp. 154–58 for discussions of White's thesis and the subsequent debate.

25. Elsewhere, Dubos describes "the theory that Judeo-Christian attitudes are responsible for the development of technology and for the ecological crisis" as "at best a historical half truth" (1990, p. 382). This statement appears in another version of his counter-argument to White's thesis, an article entitled "Franciscan Conservation vs. Benedictine Stewardship," which appears in a posthumously published anthology of some of his writings. This article offers more historical evidence about the differing environmental approaches than does the "Theology" article. Also appearing in the 1990 anthology is an article entitled "A Theology of the Earth" that preceded in its original publication the article I have used. In my opinion, the version discussed above offers a more concise articulation of his argument and more "food for thought" than the others.

For this reason, Dubos proposes St. Benedict as a more appropriate symbol than St. Francis of the optimal relationship between human beings and nature. Dubos documents the role of environmental management to achieve self-sufficiency in the operation of the first monastery established by St. Benedict in the sixth century. Dubos focuses on the important distinctions between the two approaches adopted by these saints: passive worship and creative intervention (1973, p. 48).²⁶ He proposes "taking nature as it is presented to us and trying to do with it something which is both suitable for human life and for the health of nature" (p. 49), and concludes with a reiteration of the importance of incorporating a scientific understanding into our relations with nature:

Man and the earth are two complementary components of an indivisible system. Each shapes the other in a wonderfully creative symbiotic and cybernetic complex. The theology of the earth has a scientific basis in the simple fact that man emerged from the earth and then acquired the ability to modify it and shape it, thus determining the evolution of his own future social life through a continuous act of creation. (p. 54)

Others echo Dubos' interpretation of the biblical source of an environmental ethic. Gabriel Fackre writes that humanity's "management of creation is not one of absolute control. Rather it is stewardship of the earth before a higher Claimant. To 'have dominion over' means to hold in trusteeship. Man is called to tend the earth in responsibility to its Creator" (1973, p. 122). David Ehrenfeld asserts that practitioners of Christianity have forgotten the distinction between a steward and a king. Rather than questioning the authority of biblical scripture, Ehrenfeld questions modern interpretations of the teachings of the Bible (1981, pp. x-xi).²⁷

26. Rather than exploring the theme of active stewardship and "creative intervention" in his discussion of St. Benedict, Glacken focuses on the Benedictine Rule, the work ethic based on manual labour as service to God. According to St. Benedict, the only work more important than the labour expended in productive activity was the specific tasks associated with "the performance of Divine Office, the daily psalmody and prayer" (1967, p. 306).

27. A recent article offers an overview of the ecotheological critique of White's thesis and brings out a crucial aspect of the debate which has circled around his article: "White's single-visioned reading of the past . . . encourages us to oversimplify our understanding of the present by emphasizing one value, the legitimacy of human domination of nature in the name of spiritual progress, to the exclusion not only of other, non-religious values, but also of any consideration of how economic and political systems help create or reinforce values and provide the means for implementing those values. If White is incorrect in his analysis of the causes of the environmental crisis, and we continue to follow his prescription for a solution, we may be at the mercy of forces we are not even considering" (Whitney, 1993, p. 169). This

The two references from Genesis are identified as creation myths by Glacken (1967, pp. 151–53). In both cases, humans are perceived as stewards or caretakers of nature. The “dominion” of the earth is an extension of the pre-Christian belief in humans as partners with God in managing all of creation. The major distinction, however, is that in Christianity the identity of the human as part of creation is explicit. There is no disputing the message in the story of the Garden of Eden and the sequence of creation culminating in man and woman. Human beings, however, also occupy an exalted position in creation that sets them apart from other creatures. This view of humanity’s place on earth as akin to that of God in the universe has endured throughout history and become one of the central ideas in contemporary Western thought (Glacken, 1967, p. 155). Glacken offers reference after biblical reference reinforcing the theme of human beings as *stewards of the earth* who also have *dominion over the earth* and all its creatures.²⁸

Glacken’s crucial contribution in his analysis of Judeo-Christian influence on the development of environmental thought is his distinction between the actual passages in the Bible that contain relevant messages and the exegesis and commentary that followed for the next several hundred years (1967, pp. 163–68). The White-Dubos debate outlined above offers evidence that one word alone, “dominion,” has created a vast controversy over whether or not the phrases in which it is used represent evidence of biblical sanction for human control over and exploitation of the earth’s resources:

Is this idea of dominion anything more than a distillation of everyday observation of the techniques involved in the care of plants . . . [and] the ability to kill the wild and subjugate domestic animals . . . ? Is there not here also an assertion of the dignity of man who, made in the image of God, on His sufferance exercises dominion over living things on earth comparable in a small way with God’s control of the universe? This power, moreover, is not achieved by, nor is it because of his abilities; he is lord of the creation because his superior place has been given him by God. Man’s power as a vice-regent of God on earth is part of the design of creation and there is in this fully elaborated conception far less room for arrogance and pride than the bare reading of the words would suggest. (Glacken, 1967, p. 166)

Final point is significant in light of the Vatican’s 1980 pronouncement of St. Francis as the patron saint of ecologists and critiques of the blindly reverential aspect of Franciscan environmental thought.

28. See Gray, 1981, pp. 2–8 for a critique of the view of nature and women derived from the hierarchical interpretation of the concept of dominion expressed in the Bible.

Glacken makes an important point: contemporary literal interpretation of 2000-year-old writings is inevitably coloured by the worldview of the modern reader. Personal biases allow for nearly as many interpretations of ancient writings as there are people to read and analyze them, and indeed, it is on that point that much of the post-modern view of human reality rests. At some stage, however, if we are to establish any unity on the planet or discern any common ground among its inhabitants, there must be consensus that certain universal truths exist, that there are fundamental principles upon which every human being can rely, some solid ground upon which to lay one's own personal claims.

There have been other interpretations of the roots of environmental thought. Hargrove asserts that the language and sentiments expressed in Genesis are not divine guidance. Rather, they are a reflection of the prevailing attitude when that chapter of the Bible was written and as it had been perceived for hundreds if not thousands of years. Genesis may simply have been intended as a "justification" for actions oriented toward human survival (Hargrove, 1989, pp. 15-16). Dubos speculates that "the doctrine of original sin may well be merely a symbol for the uneasiness we experienced when we first realized that we were alienating ourselves from the rest of creation" (1990, p. 228).

Middle Ages and Renaissance

[W]e can expect more unity of thought in the Middle Ages than in other periods because of the unique and commanding position of Christian theology. In no age, however, does one idea dominate all others. Alternatives arise out of agreed-upon unities. No age is so monolithic or so intellectually disciplined that it loses the capacity for cherishing old ideas or for entertaining new ones. (Glacken, 1967, p. 250)

The Middle Ages have been characterized more in their distinction from the times that followed than for any internal coherence or general common theme of their own. Society in Europe was predominantly rural with diverse activity throughout the countryside. The landscape was dotted with villages and towns, which drew the inhabitants from the surrounding areas to the commercial activity and entertainment. The "average" person

worked hard to eke out a subsistence. Christianity became more widespread and, as it expanded, came face-to-face with what were perceived as pagan or superstitious beliefs. There was broad interest in astrology, and although the terrestrial environment was not totally forgotten, thoughts about the surrounding landscape were “crowded out” by a greater interest in the celestial skies (Glacken, 1967, p. 174) and other mystical pursuits and beliefs.²⁹ One historian has described the period as follows:

The fields around town and hamlet were filled, as soon as the day labourers had left them, by goblins and will-o'-the-wisps; and the woods, as soon as the forester had closed the door of his hut, became the haunt of fairies; the ghosts could be heard gibbering all night under the yew-tree of the churchyard; the witch, a well known figure in the village, was in the pay of lovers whose mistresses were hard to win, and of gentlemen-farmers whose cattle had sickened. . . . The charms that ward off disease, the stars of birth that rule fortune, the comet that foretold the wars in Germany, the mystic laws that govern the fall of the dice, were the common interest of ordinary men and women. In a soil that imagination had so prepared, poetry and Puritanism were likely to flourish loftily among lofty men, basely among the base. The better kind of men were full of ardour, fancy and reverence. The world was still a mystery, of which the wonder was not dispelled in foolish minds by a daily stream of facts and cheap explanations. (G. M. Trevelyan, quoted by Russell, 1985, pp. 57–58)

As Christianity spread, society adopted more sophisticated and less superstitious attitudes toward the role of the human being in the universe *as it was understood at the time*. It is important to reinforce the fact that this period predates Copernicus, Galileo, and Newton. The world was still perceived as flat and the earth as stationary with everything else revolving around one's locale. Geographical awareness was constrained by a variety of social, political, and economic forces that kept people rooted to a particular region. Travel was infrequent and not without problems. There was vast, unknown, and dangerous territory “out there” inhabited by strangers and demons. However, Christianity expanded people's philosophical and spiritual horizons and offered a framework upon which to create a more ordered and peaceful society. As discussed in the previous section, there were models for truly “Christian” behaviour that involved intensive use of the land. As populations grew, there was considerable change to the

²⁹ See Pepper, 1984, pp. 38–44 for a discussion of medieval cosmology.

natural landscape as forests were cleared for settlement and more intensive forms of agriculture began to be practiced. These activities took place under the umbrella of an increasingly pervasive ideology:

If a dominant idea existed, it was that man, blessed with the faculty of work, assisted God and himself in the improvement of the earthly home even if the earth were, in Christian theology, only a sojourners' way station.

The most compelling reason for the observation and study of nature, however, was that it led to a greater understanding of God, of God's plan for a designed world, and of the truth of the Christian religion. (Glacken, 1967, p. 175)

This motivation to study the earth as a means of worshipping and increasing one's knowledge of the Creator was not unique to this period. Indeed, it was to become one of the most compelling environmental visions in history, resurfacing again and again throughout the 18th and 19th centuries, especially among "natural" scientists, and in contemporary times by diverse movements and organizations.

This transcendence of a "spiritual" focus on nature is revealed in an early example of Romantic poetry from this period, cited by Clarence Glacken from a volume entitled *Medieval Latin Lyrics*. This extract is from the manuscript of Benedictbeuern:

The earth lies open-breasted
In gentleness of spring,
Who lay so close and frozen
In winter's blustering.
The northern winds are quiet,
The west wind winnowing,
In all this sweet renewing
How shall a man not sing?
(Quoted by Glacken, 1967, p. 247)

This poem fragment and the discussion that precedes it indicate how careful one must be in describing an historical period several centuries long and represented by people of a broad geographical area and varied social conditions. The Middle Ages can not be perceived as a homogeneous era in which one theme predominated. There were diverse forces at play, the most dominant of which was Christianity. This influence is reflected in a widespread preoccupation during the period with the concept of creation. With the

increasing influence of Christianity, society became more sophisticated in its conception of the world and humanity's place in it. Although there certainly were strong pre-Christian ideas throughout the rural areas, the Church began to assert itself as a powerful and omnipresent force in society, and with this presence came the teachings of Christ as they were understood at the time. It is in this area that the religious leaders in society began to have their most powerful influence, replacing "pagan" superstitions with the "Divine Word" of God that emphasized the relationships between nature, human beings, and God. The foundations of "modern" thought were laid during this period as ideas were reworked to accommodate the Christian ethic.

The Middle Ages attitude toward nature is largely a result of the writings of St. Thomas Aquinas (1225–1274), who, according to Kreefts (1990), was the greatest philosopher in the two thousand years between Aristotle and Descartes, fulfilling "more than anyone else the essential medieval program of a marriage of faith and reason, revelation and philosophy, the Biblical and the classical inheritances" (p. 13). Aquinas' greatest intellectual and philosophical contribution to history was in his integration of Christian theology and Aristotelian thought (Bronowski and Mazlish, 1960, p. 109; Aquinas, 1954, pp. 22ff). The work to which contemporary scholars most often refer when analyzing Aquinas' contribution to environmental thought is the 3000 page *Summa Theologica*. This multi-volume work analyzes Aristotelian philosophy through Christian theology and offers a comprehensive moral foundation for the organization of human society. The following passage articulates Aquinas' belief in God as the source of all that is and explicitly links Aquinas' Christian theology with pre-Christian philosophy:

... it must be said that whatever in any way is is from God. For if something is found to be shared by a thing, it is necessary that it be caused in it by that to which it belongs essentially, as iron is ignited by fire. It was shown above, in speaking of the divine simplicity, that God is subsistent existence. . . . Again, it was shown that there can only be one subsistent existence: just as if whiteness were subsistent, it would be unique since whitenesses are multiplied by their recipients. It follows that things other than God are not their existence, but share in existence. Therefore it is necessary that all the things which are diversified because of their different ways of sharing in existence, such that they are more or less perfect, be caused by the First Being who most perfectly exists.

That is why Plato said unity must be asserted prior to any multitude. And Aristotle said . . . that what is fully being and fully true is the cause of every being and every truth, as the hottest is the cause of all heat. (Quoted in McInerney, 1990, pp. 111–12)

This example of the writings of Aquinas has been included to reinforce the complexity of the themes that were at work during the Middle Ages and to demonstrate one of the more profound influences on religious thought at the time. As mentioned above, the spread of Christianity throughout European society radically transformed many of the “pagan” beliefs at the time.

One of the most profound epistemological changes that occurred related to the use of human rationality. Glacken indicates that during this time concepts of spirituality and revelation transcended the human being, becoming matters of faith rather than internal beliefs that anyone with sufficient intelligence could discover. The result was a division between theology and philosophy, with reason no longer used as a tool of the former, which would focus on faith as the measurement of spiritual integrity (1967, p. 251). This schism would have a profound impact by setting the context for Descartes’ contribution to knowledge and the resultant dichotomous view of reality that would characterize Western ideology to the present day.

Glacken summarizes the period as follows:

It is often said that what distinguishes the modern from the medieval and classical periods is the modern sense of triumph in the control over nature in contrast with an earlier and unrelenting dependence. Such contrasts rest on an underevaluation of the extent of environmental change in classical and medieval times, on the belief that an advanced technology and sophisticated theoretical science are required for extensive and permanent change, and on a too sharp contrast between the so-called industrial revolution and the industry and technology of the past. One may wonder at the failure of thinkers of the Middle Ages to create a theoretical science comparable with that of Galileo and Newton; fail they did, but they lacked neither empirical knowledge of forest v., agriculture, drainage, nor a technology permitting them to induce sweeping and lasting changes in their environment. In fact, they made some of the most drastic changes in landscapes in human history up to that time.

. . . In the later Middle Ages the interest in technology, in knowledge for its own sake whether to improve thinking or to better the human condition, in clearing, and in drainage and the like betrayed an eagerness to control nature. (1967, pp. 349–50)³⁰

³⁰ It is apparent from this quotation that Glacken shares White’s perception of how the people of this period interpreted the Bible. This observation offers an indication of the complexity of the

The transition that took place between the Middle Ages and the Enlightenment has been labeled the Renaissance. There are no clear cut divisions to indicate exactly where and when the Renaissance began and ended. Widely accepted as originating in Italy, essentially in terms of new innovations in "science" and art, especially by historical figures such as Leonardo da Vinci and Michelangelo, the Renaissance acquired its label primarily because of a "rebirth" in the enlightened visions of the classical period. The ancient love of scenery and awareness of aesthetics was combined with an increasing interest in history and the human alteration of the natural landscape. These interests were combined with the classical view of the earth as divinely ordered. This period marked the onset of the "age of discovery" when "explorers" from all over Europe received funds to traverse the earth to discover new lands. The discoveries reinforced human wonder at the immensity of God's creation and the power inherent in such a feat. In one stroke, these discoveries offered further evidence that divine power was indeed supreme (a belief that reinforced the Church's claims of superiority) and revealed just how inadequate the religious and philosophical sources of knowledge actually were:

The tales of the voyagers far surpassed in extravagant description anything the theologians and the philosophers had written on the evidences of the existence of God as seen in the works of creation. The world was larger, more full of wonders, and much more of it was habitable than had been thought. . . .

The discovery of the existence of the antipodes, of climates and environments different from the dry deserts, the Mediterranean, and northwestern Europe reinforced ideas of the God-given fullness, richness, and variety of nature. (Glacken, 1967, p. 358)

The acquisition, in a relatively short period of time, of all this new knowledge required a revision of history books and scientific concepts and a radical transformation in the ways in which people viewed the world and each other. A broader and deeper understanding of the world was not only possible but also necessary. Indeed, the period has been viewed as a watershed between archaic or "primitive" views of the world and the modern, "sophisticated" perception. A profound change occurred in human attitudes

interpretations that are possible when examining historical evidence, yielding apparent contradictions within one work. See note 24 above.

toward nature. A crucial distinction was now revealed between nature as perceived by human beings and the "real nature," that which was set apart from and imperceptible by humans and devoid of human properties. Thus,

Whereas before the Renaissance it had been considered essential that some form of empathy be employed to acquire knowledge of nature, it is now essential that empathy not be employed. And whereas it had been believed that knowledge is to be acquired through nature and the meanings discernible therein, it is now believed that knowledge of Nature results from applying human reason to discern the necessary form of Nature. (Evernden, 1992, p. 57)

It was in this intellectual environment that the most fundamental distinction between the period preceding the Scientific Revolution and that which followed was born. The most dramatic change that occurred during this time was the alteration of Western worldviews from an *organic* conception of the earth and its inhabitants to a *mechanical* view. Empathy and anything akin to non-rational or irrational activities would become distractions from "real" science.

Finding any *simple* historical explanation for contemporary Western attitudes toward nature is impossible. Human history is complex and convoluted. Our current attitudes are largely a result of many centuries (if not millennia) of social and metaphysical transformations. Interpretation of those transformations is largely shaped by one's worldview. No scholar, however detached or objective he or she might try to be, can observe human activity from a position of absolute objectivity. Nor do we have access to the works of any aliens that might have been observing us throughout our history. Even if we did, we would have to interpret those observations in the context of the world (or universe) view within which they were made. What we do have at the end of the 20th century is the benefit of some understanding of the importance of the observer in any study of human activity. We are no longer governed by reductionist thinking, which was viewed by many and not so long ago as the *only* valid approach to scientific inquiry. Thus, one can feel confident in presenting many voices in the discussion of contemporary Western environmental attitudes, a strategy that must be used if one is to provide as

thorough an explanation of the historical record as possible. This strategy is also crucial as this survey moves forward in history to the period known as "The Enlightenment."

The Enlightenment: The Most Paradoxical Misnomer in History?

"The Enlightenment," "the Age of Reason," "the Scientific Revolution" are all terms applying to a period lasting at least one century beginning at some point in the 17th century.³¹ This period was by no means monolithic; however, there were certainly dominant and long-lasting influences that have shaped Western thought ever since. Given the amount of attention that has been paid to the Enlightenment, one cannot help but draw parallels with our own time. The spectacular social, political, and ideological transformations that have taken place since the end of the second world war, and especially in the last ten years, raise questions regarding societal self awareness. One wonders if the people living in that time were as aware of the paradigm shift that took place then, as we are of the one occurring in this century.

In addition to speculating on the self-awareness of the intelligentsia who lived during the Enlightenment, one also feels compelled to question the label itself. *Webster's Collegiate Dictionary* has three definitions of the verb *enlighten*: (1)*archaic*: illuminate; (2a) to furnish knowledge to (i.e., instruct) and (2b) to give spiritual insight to. Webster defines *enlightenment* as follows: (1) the act or means of enlightening; the state of being enlightened; (2)*Capitalized*: a philosophic movement of the 18th century marked by a rejection of traditional social, religious, and political ideas and an emphasis on rationalism, (used with "the"); and (3)*Buddhism*: a final blessed state marked by the absence of desire or suffering. It is instructive at this point to recall the last sentences in one of the epigraphs that opened this chapter: "And while Enlightenment may involve

31 The *Dictionary of the History of Ideas* dates the period from the "Glorious Revolution of 1688" to the end of the 18th century and the onset of the Romantic period (1973, p. 89). The terms "Enlightenment" and "Scientific Revolution" describe two processes that occurred approximately simultaneously, the former in the newly developing social sciences and what are now called the humanities, and the latter in the natural sciences, especially, at the time, in physics, chemistry, and astronomy.

many sorts of experience, I think it important here to notice how often Enlightenment is a sudden realization of the biological nature of the world in which we live. It is a sudden discovery or realization of *life*" (Bateson, 1987, p. 74). One is struck by the apparent paradox contained in the second last (historical) definition of "enlightenment" and Gregory Bateson's comment, which stems from the third definition. Putting the mystical aspects of the Buddhist experience to one side for the moment and relying primarily on rational thought, it seems to follow that the process of acquiring knowledge, that is, casting light upon some aspect of existence, would also bring one more into touch with "life" itself. Buddhist cosmology, which many Western thinkers perceive as being comprised of metaphysical and spiritual wanderings that are out of touch with "reality," appears, at least in this cursory statement, to offer a more plausible explanation of the process of enlightenment than does the Western culture that coined the term. The general view of historians is that "enlightenment" essentially refers to the process whereby many people during that time had their eyes opened to question the imposition of the Christian Church's doctrine of original sin and everything that accompanies it (Blackwell, 1991). Given the legacies of the "emphasis on rationalism" (an increasing detachment from humanity's "natural" roots and increased exploitation and destruction of the basic foundations of and resources required for human existence), one cannot help questioning the wisdom behind such an apparently inappropriate or at least limited appellation. It appears that one Eastern cosmology has a more "realistic" grasp on these "rational" processes than does the culture that supposedly gave birth to the term. Given the increasing attraction to more spiritual approaches to or understandings of the natural environment, it appears that Buddhists may have a more "mature" approach than does the West in more than one manifestation of enlightenment.

Other scholars have also questioned the term "Enlightenment." In their history of Western thought from the pre-Renaissance to the 19th century, Bronowski and Mazlish state: "To us the Age of Enlightenment . . . is not a restful abstraction. It is a complex of

people and groups with conflicting ideas which yet have a common direction: and this is why we see it and present it under a new name, as the Age of Reasoned Dissent" (1960, p. *xiii*). In his survey of the history of science, Colin Russell states that "if ever an era was grossly misnamed that was it: the 'Enlightenment' " (1985, p. 93).

Although this critique may seem to be a detour, it serves as a reminder of the inherent arrogance and self-delusion in Western ideology that allows for the creation of a term such as "The Enlightenment" and the potentially catastrophic epistemology and ideology to which it refers without recognizing the internal paradox within the whole exercise. Despite skepticism regarding the appropriateness of the labeling of this period and critique of its legacy, one must recognize its importance in releasing human inquiry from the fetters of the blind faith that threatened to destroy any possibility of the questioning that is necessary for progress.³² As will be seen in the next section, Enlightenment thinkers of all types made a crucial contribution in humanity's on-going search for truth.

The Enlightenment and Its Critics³³

And new Philosophy calls all in doubt,
The Element of fire is quite put out;
The Sun is lost, and th' earth, and no man's wit
Can well direct him where to looke for it.
And freely men confesse that this world's spent,
When in the Planets, and the Firmament
They seeke so many new; they see that this
Is crumbled out againe to his Atomies.
'Tis all in peeces, all cohaerance gone;
All just supply, and all Relation:
Prince, Subject, Father, Sonne, are things forgot,
For every man alone thinks he hath got
To be a Phoenix, and that then can bee
None of that kinde, of which he is, but hee.

32. There is common ground on this point with social ecologist Murray Bookchin: "That our society has warped the best Enlightenment ideals, reducing reason to a harsh industrial rationalism focused on efficiency rather than an ethically inspired intellectuality, that it uses science to quantify the world and divide thought against feeling; that it uses technology to exploit nature, including *human* nature, should not negate the value of the underlying Enlightenment ideals" (Bookchin and Foreman, 1991, p. 59).

33. The primary sources for the following section are the *Dictionary of the History of Ideas* (1973) and *The Blackwell Companion to the Enlightenment* (1991), with supplementary references as indicated. See also Pepper, 1984, pp. 46-59, and Merchant, 1980 for discussions of the "scientific revolution."

Most scholars date the onset of the period with the transition from feudal to more centralized geographical relationships. The social, psychological, and spiritual consequences of this change in economic relations were profound and far-reaching. The above fragment from John Donne's, "An Anatomie of the World" (quoted by Toulmin, 1982, p. 220), which appeared in 1611, when Galileo and Kepler were at their most creative, and 75 years before Newton's *Principia*, indicates that Donne (1572–1631) was reacting in a prophetic manner to the themes and processes that would come to characterize society and human beings decades before they actually began their transformation. The Enlightenment originated in England, with simultaneous and significant influence in France, Germany, and Italy. It reached its climax in the mid-1700s in Paris and Scotland, where "coordinated fellowships of thinkers and men of the world developed the body of thought which is peculiar to the Enlightenment." These intellectuals brought forward writings from classical Greece, the Renaissance, and the Reformation, building upon the literary and philosophical influences of Seneca, Virgil, Platonic mathematics, Aristotle's conception of nature, Stoic ethics and anthropology, Plutarch's notions of nation and liberty, and the works of Galileo (1544–1603), Bacon (1561–1626), Hobbes (1588–1679), Descartes (1596–1650), Locke (1632–1704), Newton (1642–1727), and Leibniz (1646–1716)³⁴ (*Dictionary*, 1973, p. 90; *Blackwell*, 1991, p. 2; Clark, 1989, pp. 260–68).

These thinkers are now seen as having formed the foundation for a rational, "modern" scientific methodology in conjunction with a rejection of the dogma and ritual of the Catholic Church. There was a widespread attempt by the intellectual leaders of society to regain the supremacy of human beings in "the grand scheme of things" by focusing on

34. Roszak refers to Frances Bacon as "the most precocious mind of the scientific revolution" in his analysis of this thinker and his impact on the development of modern thought (1973, pp. 132–61). For a fairly comprehensive discussion of many of these thinkers, see Bronowski and Mazlish, 1960. See also, Debus, 1978, pp. 102–12, for a general overview of Bacon, Descartes, and Galileo, and their contributions to the scientific revolution; and Bowen (1981) for a survey of the impact of Bacon's theories on the development of empiricism and geographical thought. See Merchant (1980) for an ecofeminist analysis.

the rational faculty. Since observations of "empirical" reality had resulted in a worldview markedly different from that held for centuries and perpetuated by the Church, religious and metaphysical sources of knowledge were rejected in favour of the products of "sensible experiments and necessary demonstrations." Galileo is credited with beginning the justification of the modern division between science and religion with the following:

Methinks that in the discussion of natural problems, we ought not to begin at the authority of places of scripture, but at sensible experiments and necessary demonstrations. For, from the Divine Word, the sacred scripture and nature did both alike proceed. . . . Nature, being inexorable and immutable, and never passing the bounds of the laws assigned her, . . . I conceive that, concerning natural effects, that which either sensible experience sets before our eyes, or necessary demonstrations do prove unto us, ought not, upon any account, to be called into question, much less condemned upon the testimony of texts of scripture, which may, under their words, couch senses seemingly contrary thereto. . . . Nor does God less admirably discover himself to us in Nature's actions, than in the Scripture's sacred dictions. (Quoted in Bronowski and Mazlish, 1960, p. 125)

Bronowski and Mazlish see these statements as setting up "nature as an activity outside men" (1960, p. 125). This type of thinking paved the way for the development of the mechanical conception of the universe. The Church did little to resist the process, continuing to ground its "facts" in metaphysical notions such as miracles brought about by divine intervention. The result was the rise of the rational faculty as the only element in the search for truth that could be trusted to yield objectively verifiable propositions. The legacy has been what Ehrenfeld refers to as "the arrogance of humanism," the contemporary notion that human beings can solve anything by applying our rational faculty to devising technological solutions to any problem. In general terms, the period

was characterized by a shift of emphasis from old to new anthropological metaphysics, from the preoccupation with natural science to history and the social and life sciences, a turning-away from dogma and traditional conventions, a critical reappraisal of established authority in the fields of religion, politics, philosophy, and the arts. The human situation and man's liberty, the place of man in society, the interrelation of social and natural phenomena, their "uniformity amidst variety" come to condition the guiding lines of thought. The Enlightenment was an iconoclastic movement intent both on interpreting and ushering in social change. (*Dictionary*, 1973, p. 90)

One view of the origin of this thinking is the reaction to what were then perceived as “man’s three humiliations” brought about by several unrelated “discoveries”: (1) the earth is not the center of the universe; (2) “man, rather than being created in the divine image, is a creature of nature like the other animals”; and (3) human rationality is subject to passions and subconscious urges (*Dictionary*, 1973, pp. 91–92). The Enlightenment thinkers sought to deal with these “humiliations” as “intellectual conquests,” setting out certain responsibilities: the discovery of truths through empirical observation, the promotion and realization of human happiness through social mechanisms and processes, and the exploration of the limits and conditions of liberty. The immediate legacy of the Reformation had been the replacement of one single concept of divine order with the view that society and culture are products of human action and history, and therefore, are subject to change. Thus, human activity and human nature became subjects of study for the new “social” sciences. To respond to the goal of widespread human happiness through social processes, these sciences not only studied the empirical evidence put before them in the form of the societies of the time but also examined normative aspects specifically directed toward legislative institutions and how they could be made to promote happiness. The Enlightenment was an explicitly moral endeavour, striving to determine the “right” way for humans to live. The diversity within the movement was reflected in the different thinkers’ views of what was “right” (*Blackwell*, 1991, p. 4).

Because the primary emphasis of scientific activity was on developing a balanced relationship between human beings and society, analysis of human impact on the natural environment began to recede from scholarly attention. Despite the fact that “nature” was one of the most used words during the period, there was little focus on the natural landscape. The trend toward urbanization was underway and, with it, the gradual alienation of human beings from their natural roots. Indeed,

the concept is brandished as a weapon in the urge to free mankind from the curse of original sin, against the world of conventions and of tradition, as, e.g., superstition, prejudice, the belief in miracles and the reliance on grace and revelation, the

hierarchical order of society and governmental constraints of all kinds, all these are rejected as being unnatural. At the same time, nature imposes its own constraints . . . by way of an aristocratic Epicureanism. . . . in the Puritan values of the rising commercial bourgeoisie;³⁵ work, frugality, usefulness, sexual morality, and benevolence are regarded as natural, while passions are not. (*Dictionary*, 1973, p. 94)

Human beings were encouraged to detach themselves from their superstitions and passions, developing their sense of reason and employing social and legislative institutions to protect them from the irrational propensities of "nature." For some, the development and pursuit of arts and sciences were seen as the ultimate weapon against ignorance, superstition, fanaticism, oppression, and barbarism (*Dictionary*, 1973, pp. 101–102). Others viewed the institutions of civilization themselves as "a major factor in the corruption of men and their alienation from nature, from simplicity, purity of heart and the life of natural justice, social equality, and spontaneous human feeling; artificial man had imprisoned, enslaved, and ruined natural man" (*Dictionary*, 1973, p. 102). The common ground between these two interpretations was a belief in and pursuit of universal truths, principles that are applicable to all people all the time and everywhere. "What the entire Enlightenment has in common is denial of the central Christian doctrine of original sin, believing instead that man is born either innocent and good, or morally neutral and malleable by education or environment, or, at worst, deeply defective but capable of radical and indefinite improvement by rational education in favorable circumstances, or by a revolutionary reorganization of society" (*Dictionary*, 1973, p. 110).

The emphasis on rationality in scientific enquiry resulted in an emphasis on an empirical method for observing reality. This emphasis on the empirical, in conjunction with the need for universal principles, meant that

there was considerable stress laid on the importance of the observations being evident to anyone. Indeed, . . . it was *necessary* that "everyone" see these things, because there is

³⁵ Marxist analysts view the shift in the division of labour as the key variable in the development of Enlightenment thought and the alienation from nature. One scholar describes the transformation as a shift in emphasis away from those who work *with* nature to those who work *on* nature (i.e. scientists); a pattern that she views as a precursor to modern capitalism (Fitzsimmons, 1989, p. 108). One non-Marxist scholar sees the invention of mechanical devices and machines such as the steam engine as significant turning points (Botkin, 1990).

now no other authority to vouch for them. In the past, the "authority" of nature was presumed to come from God: we saw it in the messages He chose to present. With the systematizers of the Renaissance, the authority shifts to what we might call the denotative core of nature: the innate "necessity" that ensures adherence of the world to human-discerned laws. But as interest shifts from similitude to difference, and from general principles to particulars, nature is no longer "verified" by any overarching abstraction, but is instead authenticated by the general observance of humanity: nature is as it is because we can all see it. We, collectively, become the guarantors of the reality of nature. The great amorphous body of humanity becomes the new authority, and its perceptual voting power will override the testimony of individual genius. (Evernden, 1992, p. 85; see also Bowen, 1981, pp. 3-4)

One of the most enduring images produced by Enlightenment thinkers was the view of the universe as an intricate and complex machine. According to Botkin, this view was "consistent with the idea of a divine order in most of its particulars and consequences, and thus the mechanical perspective simultaneously reinforced the ideal of divine order and was reinforced by that theological perception" (1990, p. 103; see also Clark, 1989, pp. 260-68). This conception of the universe was one way in which religiously oriented intellectuals could reconcile their pursuit of rationality and rejection of blind devotion to the Catholic Church. Rather than being seen as proof of the existence of God, nature's perfect balance, the power of the oceans, and the majesty of the mountains were seen as demonstrations of God's power. This view emerged as the organic view of the Middle Ages began to recede in the face of the rationality that simultaneously stemmed from and led to the discoveries of science. "The development of modern sciences, beginning with physics, led to a change in metaphors, but more profoundly to a change in explanation, from a belief in the Earth as an organism created by the Great Artist to a belief in the Earth as a magnificent machine invented by the Great Engineer" (Botkin, 1990, p. 103; see also Merchant, 1980 and Clark, 1989).

Despite this attempt by some Enlightenment thinkers to remain loyal to the Church yet reject its dogma through their growing criticism of its methods and structure, one of the major results of the emergence of rationality as a dominant human approach to life was the gradual secularization of society. The forces at work in European society during the

early centuries of this millennium had been interactive and mutually reinforcing. As one scholar states, it was not so much a case of the earlier modes of thought being proved wrong but rather that the changing face of society required different explanations:

Advancing scientific knowledge influences the way we perceive the world. *But, the way the world is experienced in our culture influences what kind of science gets developed.* As Western society after the Middle Ages became increasingly secular, it created a science based on the positivistic assumption that only what can be measured physically is scientifically real. That science then finds that everywhere it looks in the universe it sees nothing save that which is measurable! A basic tenet of the new science was that scientific explanations are deterministic and reductionistic, that science then peers out into the universe and discerns nothing resembling purpose!

... When the shift took place from medieval to modern society, it was not a matter of the medieval paradigm's being proved wrong. Rather, the gradual secularization of values that had been taking place over several centuries had brought the culture to the point where an empirical science served the needs better than the outmoded Scholasticism. Similarly, if the adequacy of the scientific authority system is being challenged today, it is first of all not a matter of its having been proved wrong so much as a question of whether the needs of persons, societies, and the planet are being well served. (Harman, 1988, pp. 121-22)

The negative side of the increasingly secular and mechanistic view of the universe that took place during the Enlightenment was the legacy created by such thought. If nature is a machine, then problems in nature can be fixed. Human beings saw science, and later, technology, as the keys to solving nature's problems or re-engineering the landscape to accommodate increasingly intensive human impacts. The legacy, of course, is the 20th century Western approach to environmental management. "Not only has it been customary to use civil-engineering approaches to environmental issues, but it is consistent with the mechanistic perception of nature that, as a machine, nature is better improved by using novel engineering devices than by employing organic approaches. This point of view is consistent with much of our attitude toward the development of land and resources" (Botkin, 1990, p. 105).

Another consequence of the shift in worldviews during the Enlightenment was in the conception of human nature. Thinkers at the time viewed their efforts as inherently moral. However, the change in orientation away from an organic view of the universe allowed for the promotion of individual needs ahead of the community

Human nature, once made in the image of God and innately capable of brotherly love, became a self-centred consumer of pleasure, the sole purpose of whose Reason was to further its own existence. If an image of God still lurked in human nature, it was one of omnipotence rather than compassion. Purpose in life shifted from serving God and society, and thereby oneself, to serving oneself first, and thereby—almost by accident—society. . . . Where the God-given right of an individual to exist once put the other members of society under an *obligation* to care for her or him, in the new worldview no such social obligations are assumed. Each person has a *natural right* to preserve his life; hence his labour is his own, to sell if he chooses, and so is any property that he improves by his labour. But no moral obligations toward others exist beyond the contracts of the marketplace.

. . . if God exists, the new worldview decrees that He speaks only through each individual's conscience, never through religiously ordained social laws. Nevertheless, worldly success, particularly material success, probably indicates divine approval and is a sign of great moral virtue. (Clark, 1989, p. 269)

This ethic of individual rights gave birth to the rampant competitiveness that would characterize Western, especially American, society in the decades to come. Indeed, the settlement of the American frontier throughout the 18th and 19th centuries would be inherently individualistic, materialistic, and competitive. The frontier mentality of “man” against nature, “man” conquering the wilderness and the savages that inhabited it would become one of the most enduring images of this period in American history.

Alternatives to the “Enlightened” Thought of this Period

No culture or period in history is monolithic or uniform in its views and the Enlightenment was no exception. Although not as well known as those to whom most historians look for the roots of modern thought (such as Locke, Hobbes, Descartes, etc.), there were many thinkers at the time who did not unreservedly embrace the pursuit of secular rationalism that characterizes this period. Many 18th-century thinkers applied in a religious context the new ideas that were emerging by embracing a concept of theology that included “nature” and a “Supreme Being.” Drawing on beliefs that could be traced back through the Middle Ages to the ancient Greeks, these “Natural Theologians” used the “Book of Nature” as their scripture and the existence of the universe as proof of its Creator. The logic was simple. If there was a creation there had to be a creator. The

purpose of humanity was to cooperate with and cultivate the rest of creation on this plane of existence. This view of human beings actively involved in the cultivation of the earth bears remarkable resemblance to the ethic promoted by St. Benedict centuries earlier.

Two important contributions at the time were John Ray's *The Wisdom of God Manifested in the Works of Creation* (1691) and William Derham's *Physicotheology*. Ray (1628-1705) and Derham (1657-1735) were highly sensitive to the hand of the creator or "wise Providence" in the form and state of natural processes on earth and of humanity's place and role in the cosmic story. "Although the Creator had bestowed great gifts on man, all ranks of being in the world had their place in nature and were not created for man alone. Man in this conception is a mighty but not omnipotent being on earth; he is at the top of the scale, but with responsibilities, for he is a caretaker, or . . . a steward of God" (Glacken, 1956, p. 75).

These thinkers represented a counterpoint to the emerging mechanistic view of the universe and the Cartesian duality that necessitated a separation between science and religion. These early exponents of natural theology spoke of the harmony in nature and integrated the classical notion of cosmic design, Old Testament ideas of stewardship, and 17th-century scientific knowledge into a framework of thought that would reappear in certain applications of 19th-century Romanticism and spiritual alternatives to 20th century environmental management and conservation strategies. The omission of traditional biblical scripture or any intermediary between the creation and its creator made it unacceptable to most orthodox Christians at the time and thus, sets it on the conceptual boundaries of Enlightenment thought. Actually, natural theology, more than any other system of beliefs at the time, found a means of reconciling the emphasis on rationalism that dominated the period and religious beliefs "uncontaminated" by human misinterpretations of the Divine Word:

Its most distinctive mark was a conviction that man could now discover more about the world by the rational pursuit of scientific enquiry than by listening to the advocates of revealed religion. After all, it seemed, the interpreters of Scripture had more than once

been confounded by empirical knowledge. And if this were true of nature, might it not also be true of everything else, including God? (Russell, 1985, p. 114)

Natural theology continues to offer an attractive philosophical and religious vision for those who feel a need to “spiritualize” modern secular society without relying on “organized” religion as a framework.³⁶

Beyond natural theology, more rigorous opposition to the Enlightenment came in France from church leaders who viewed the denial of the notion of original sin as a vicious attempt to undermine the Church’s authority. The Counter-Enlightenment was primarily comprised of three separate factions: orthodox church leaders; members of new religious sects seeking to respond to Enlightenment attacks on traditional Christian views; and a diverse collection of thinkers who rejected the unalterable set of principles solely derived from rational thought advocated by most Enlightenment thinkers. Although these “rebels” did not offer a single coherent body of thought (the primary reason that they remain obscure to most contemporary scholars), several of them presented views from which have emerged such profound traditions as the Romantic movement of the 19th century; academic disciplines and subfields such as cultural anthropology, linguistics, and aesthetics; and contemporary social phenomena such as the animal rights movement.

Some Counter-Enlightenment thinkers (e.g., Giambattista Vico [1668–1744], J. G. Hamann [1730–1788], and Johann G. von Herder [1744–1803]) firmly rejected the notion of one common and timeless Natural Law to which some cultures adhere better than others, insisting on a notion of cultural plurality and uniqueness. For Vico, acquiring knowledge about any culture involved determining the types of questions members of that culture ask about the universe and what symbols or acts are used to ask the questions, and accepting that the questions change as a culture develops (*Dictionary*, 1973, p. 103). Hamann revealed his sense of spirituality in an obscure, introspective

³⁶ For discussions of 17th and 18th century natural theologians and their critics, see Merchant, 1980, pp. 246–52, Bowen, 1981, pp. 106–22, and Russell, 1985, pp. 109–24.

Lutheran sect, focusing on the inner self and a sense of faith in nature. Hamann viewed all rules or precepts as “deadly” and dismissed the so called rational pursuits of some of his contemporaries as arrogant and futile: “Nature is capable of wild fantasy and it is mere childish presumption to seek to imprison her in the narrow rationalist categories of ‘puny’ and desiccated philosophers. Nature is a wild dance, and so-called practical men are like sleepwalkers who are secure and successful because they are blind to reality; if they saw reality as it truly is, they might go out of their minds” (Hamann quoted in *Dictionary*, p. 105). Despite his harsh critique, Hamann was a devout Christian, viewing the Bible as the word of God, the primary source of interpretation of the universe (*Blackwell*, 1991, p. 109). In one sense, Herder integrated the views of Vico and Hamann, asserting an organic and holistic approach to the study of human culture and nature. He believed that each culture has its own unique essence, which is a source of vibrancy for human expression. He viewed people as the soul of the culture and cultural diversity as essential: “different cultures could and should flourish fruitfully side by side like so many peaceful flowers in the great human garden” (*Dictionary*, p. 105-6).

Of these three Counter-Enlightenment thinkers, only Herder receives attention from contemporary geographers. To Glacken, Johann von Herder represented “. . . the best in the old that was now to vanish, with hints of the new” (1967, p. 537). Referring to Herder’s multi-volume *Ideen zur Philosophie der Geschichte der Menschheit* (Outlines of a Philosophy of the History of Man) (1784–1791), Glacken praises Herder for his “meaningful synthesis” of many of the dominant themes of the period and his distinction between humanity and its relation to the earth as a whole and individuals and their relations with individual parts of that whole (1967, p. 538). It was in Herder’s analysis of the role and nature of human beings and society, especially in his discussions of cultural differences, that Glacken feels a significant contribution was made. Bowen also shares this perception, remarking on the empirical foundations of Herder’s philosophy and the important role of geography in providing a foundation for his studies (1981, pp.

216-19). Herder also expounded on the inherent unity of humanity and its interdependence with nature: "awake or asleep, in motion or at rest, contributing to the change of the universe; shall he ["man"] not also be changed by it? It is far too little to compare him to the absorbing sponge, the sparkling tinder: he is a multitudinous harmony, a living self, on whom the harmony of all the powers that surround him operates" (Herder quoted by Glacken, 1967, p. 540). Glacken summarizes and places in perspective Herder's contribution as "the flowering of a philosophy of man and nature which in his time had reached its zenith and was beginning to decline, even granting the superiority of his eclecticism over some of the more dogmatic ideas of men like Montesquieu. The design—the fitness of the earth as an environment, the fitness of humanity to live on it, the influence of humanity on the earth and of the earth on humanity—admirably as it was worked out by Herder, still was formed in an old mold" (1967, pp. 542–43). Many of the ideas that Herder pursued would later be picked up by Alexander von Humboldt.³⁷

There are numerous themes in this brief summary of some of the Counter-Enlightenment thinkers that indicate how many of the diverse expressions of the movement would be pursued in the closing decades of the 18th and in much of the 19th century by Romanticism. Throughout the course of the 18th century, European society was radically transformed, and with it, the natural landscape. The English in particular not only "tamed" and "ordered" nature

37. Humboldt's work has not been included in this thesis primarily because, until recently, he has not been viewed as having had a significant influence on the development of environmental thought, receiving little attention outside the work of historians of geography. The geographers who followed him have contributed to some of the misconceptions of his work as they allowed themselves to be absorbed by the wave of reductionism in science that rejected Humboldt's more holistic vision as outdated and idealistic (Bowen, 1981, pp. 260, 269). A recent article suggests that Humboldt may resurface as contemporary scholars dig deeper in their search for solutions to modern environmental problems, a survey which may reveal the significant contributions that geographers have made throughout recorded human history. See Colwell (1987), who refers to Humboldt as a "neglected figure" and to Humboldt and John Dewey as holding the "philosophical key to an ecological reconstruction of science capable of impartial illumination of the sources and consequences of values everywhere throughout nature" (pp. 110 and 111).

in large landscape gardens or cultivated fields, but also early learned to enjoy the more thrilling, emotional pleasure which they began to feel in the presence of what they called "the sublime" in nature: vast spaces, mountainous country, wild and untamed landscape. Whether the enthusiast of nature went to the landscape for evidence of the presence of the Deity or merely to enjoy natural beauty, he inevitably learned to feel emotions in the presence of external nature and to examine the quality of his feelings. (Norton, 1974, p. 1695)

It was in this cultural and intellectual environment that many of the most profound and exquisite works of English literature would be created. Counter-Enlightenment thinkers would later inspire people like William Blake, Samuel Taylor Coleridge, and William Wordsworth. Indeed, Blake was the first poet to critique the Enlightenment, beginning in 1788 with his attack on its creeds and champions, developing his own spiritual philosophy, and eventually becoming one of the most celebrated of the Romantics. The "natural" landscape in England and throughout Europe would form the backdrop for their creations and represent the source of their inspiration.³⁸

Despite the conflicting views discussed above, and the dominance of Enlightenment rather than Counter-Enlightenment thought in modern history, it is important to recognize the impacts of both, especially in terms of human relations with nature:

[A]s much as we rightly insist that mankind is part of nature, we must still isolate human activities as a unique force requiring special techniques for study and its own philosophy. It is wrong to say that Western tradition has emphasized the contrast between man and nature without adding that it has also emphasized the union of the two. The contrasting viewpoints arise both because man is unique and because he shares life and mortality with the rest of living creation. (Glacken, 1967, p. 550)

The period during which human beings began to wrestle most profoundly with these two contrasting views emerged at the end of the 18th century and continues today. Although primarily recognized as the time during which the "Romantic" vision took hold, as we will see, there continued to be diverse and, in some cases, radically opposing attitudes toward nature. Romanticism set the stage for the debate by building on the works of

38 The 19th-century "natural" landscape that formed the backdrop for the Romantics was, of course, a product of centuries of human transformation. The wilderness characteristics of North America had vanished long ago in Europe as a result of the long history of human settlement. Nevertheless, the English landscape was and continues to be exquisite in many areas and Romantic artists captured the aesthetic qualities of the harmonious interaction between humans and the rest of nature.

those who rejected the mechanistic conception of nature that took hold in the Enlightenment and by recapturing the spiritual essence in human existence.

Inspiration from Tintern Abbey and Walden Pond

By the late 18th century, . . . the appreciation of nature had become a sort of religious act. Nature was seen not only as beautiful but also as morally healing and exercising a "beneficent spiritual power over man." Thus contact with wilderness encouraged and inspired men to *transcend* the material and reach to the spiritual plane. (Pepper, 1984, pp. 80-81)

The Romantic period is generally perceived to cover the late-18th through to the early 20th century. An earlier English poet, James Thompson, expressed "romantic" thoughts and images in the early 1700s, especially in his epic work, "The Seasons." As mentioned above, the movement was largely a reaction against the rationalist and materialist responses to and applications of Cartesian duality and a further development of the organic conception of nature that had been evident before the Scientific Revolution and in alternatives to the Enlightenment thinkers. Although the Counter-Enlightenment had contributors throughout Europe, and Germany represents the actual birthplace of Romanticism, it is English and American Romantic literature that retains an audience and no doubt will continue to do so for centuries to come. "Romanticism was a reaction against that which could constrain and stultify the human imagination, whether in the form of literary rules, acceptance of ancient authorities and received wisdom, or using 'reason' as an ultimate arbiter" (Russell, 1985, p. 180). The period contains the spiritual and philosophical foundations and progenitors of many contemporary environmental groups and ideals such as the Sierra Club, the World Wildlife Fund, and the Audobon Society, to name just a few. Indeed, the Romantics represented a "last gasp" attempt to preserve at a societal level an organic view of creation until deep ecology and the Gaia hypothesis emerged in the 1970s

The term “romantic” still carries with it the 19th-century images of a solitary human being surrounded by a vast natural landscape, a soul desperately seeking insights into the mysteries of the universe through explorations of nature and human behaviour or a soul at peace with the cosmos who shuns the trappings of “civilization” to live in harmony with the rest of creation. The Romantic poets, in particular, were on a quest toward a deeper understanding of the universe, and it is the results of their explorations into the natural landscape that created their legacy. They

obeyed an inner call to explore more fully the world of spirit. In different ways each of them believed in an order of things which is not that which we see and know, and this was the goal of their passionate search. They wished to penetrate to an abiding reality, to explore its mysteries, and by this to understand more clearly what life means and what it is worth. They were convinced that, though visible things are the instruments by which we find this reality, they are not everything and have indeed little significance unless they are related to some embracing and sustaining power. (Bowra, 1961, p. 9)

The Romantic poets were trying to see through the cloak that can obscure the true essence of life, to see past the physical realm into the spiritual. By using the natural landscape as the focus for their search, they felt that they could more easily penetrate the as-yet-unsolved mysteries of human existence — our relationship with other living things, other human beings, and ultimately, the source of all that the poets perceived, whether that be a cosmic or divine force beyond human consciousness or simply a humanly constructed concept. They chose natural landscapes for the most part; however, some, like William Wordsworth in this extract from “Lines Composed a Few Miles above Tintern Abbey,” perceived spirituality in human scenes as well:

For I have learned
To look on nature, not as in the hour
Of thoughtless youth; but hearing oftentimes
The still, sad music of humanity. . . .
And I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of man;
A motion and a spirit, that impels

nature and of science—suggestions which would have scandalized Boyle, Newton and succeeding generations whose God was separate from nature and sovereignly in control of it. (Russell, 1985, p. 178)

This characterization of the distinction between Davy and his predecessors highlights the contrast between the classical approach to science that has had the most profound impact on Western society to date and the Romantic view that has been largely relegated to the arts and therefore marginalized from a society that is dominated by social science. Davy not only offered humanity the benefits of his inquiring mind in the field of chemistry but also collaborated with some of the most celebrated poets of his time, assisting Wordsworth, Robert Southey, and Samuel Taylor Coleridge. Russell describes Davy as one of those who “recoiled in horror from the arid deism of much post-Newtonian science and the ugliness and degradation coming upon the new industrial urban society” (1985, p. 181). Although Davy was not alone in this feeling, he is one of the few Romantics at the time who engaged in science as well as art and he is distinct in that his scientific achievements were in a field largely dominated by the classical tradition. Other Romantics were more prolific in what are now referred to as social sciences: Wordsworth’s geography of the Lake District; William Blake’s penetrating commentary and critique of the social, economic, and political conditions of the era. One scholar has characterized the period in a manner that implies that the Romantics had a rather schizophrenic approach to science: “. . . there was a strong theme of an organic aesthetic apparent in the Romantic poets, an aesthetic in some ways dependent on science, and in other ways dependent on the rejection of sciences” (Botkin, 1990, p. 97).

Certain facts relating to Davy’s “one-man bridge” between science and Romantic art should be articulated at this point lest the reader receive the impression that he was unique and simultaneously successful and celebrated in both fields. Russell highlights three specific points: (1) the peak in Davy’s commitment to Romanticism preceded his greatest scientific discoveries; (2) as mentioned above, other Romantics were also engaged in

science at the same time as they pursued their art (Coleridge, Wordsworth, and Shelley all studied chemistry); and (3) perhaps the greatest common ground between Romanticism and integrative approaches to science is their respective investigations into the essential unity within nature (1985, p. 185). This last point may provide the greatest insight into Davy's career and legacy. Had he been willing to follow the conventions of reductionist science as it was expressed at the time, he might have offered an overall comprehensive chemical theory rather than what one of his contemporaries described as "brilliant fragments" (J. J. Berzelius quoted in Russell, 1985, p. 185). And had he eschewed chemistry to devote more time to his art, he might now stand in the ranks of Wordsworth, Coleridge, and the other poets of his time. Davy's greatest legacy for scholars struggling to reconcile the conflicts between science and art, humanity and nature is the record of his life, the fact that his work in both streams of human expression has not been lost to obscurity. His success offers proof that efforts to integrate what Cartesian dualism attempts to divide are not futile, that such unity of thought between artistic and creative expression and rational analysis of the empirical world is not impossible.

Literary romanticism was not solely the domain of the English. Indeed, some of the most enduring American literature stems from that period, especially in the writings of Ralph Waldo Emerson (1803- 1882), whose first essay, *Nature* (1836), contains his personal philosophy of life, in which he offers, according to one scholar, a perception of himself and nature "as outward manifestations of spiritual realities" (Spiller in Emerson, 1954, p. v). Emerson demonstrated a profound awareness of human limitations and, more importantly, human potential:

The problem of restoring to the world original and eternal beauty, is solved by the redemption of the soul. The ruin or the blank, that we see when we look at nature, is in our own eye. . . . The reason why the world lacks unity, and lies broken and in heaps, is, because man is disunited with himself. He cannot be a naturalist, until he satisfies all the demands of the spirit. . . . [W]hen a faithful thinker, resolute to detach every object from personal relations, and see it in the light of thought shall, at the same time, kindle science with the fire of the holiest affections, then will God go forth anew into the creation. (Quoted in Sealts and Ferguson, 1969, pp. 34-35)

Emerson believed that there is an intimate and essential link between human spirituality and respect and care for other living beings. That spiritual focus and employment of our intellect are required to enable humans to be part of a unified and interdependent living system without being a disruptive element to the natural balance. Indeed, Emerson felt that a truly devotional relationship was attained through an appreciation of nature. "The aspect of nature is devout. . . . The happiest man is he who learns from nature the lesson of worship" (quoted in Sealts and Ferguson, 1969, p. 30). Emerson's major contribution to the reflections of the landscape was more subtle than those of his contemporaries. In fact, he was much more eloquent in his expressions of the nature of the human soul than he was in human interactions with nature. However, his connection of humanity's spiritual progress to our relationship with the natural landscape made an important contribution to the development of Romantic thought.

One of Emerson's contemporaries wrote what would later become one of the most enduring pieces of Romantic literature ever produced. Henry David Thoreau (1817-1862) met Emerson in 1837, forming a friendship that would become one of the most important relationships in both of their lives. In contrast to Emerson's success among his contemporaries, Thoreau died at the age of 45 relatively unappreciated. However, in terms of their respective impacts on the environmental movement in the latter half of the 20th century, Thoreau emerges as enjoying greater posthumous popular acclaim. Famous for his two-year living experiment, documented in *Walden* (1854), Thoreau personified and epitomized the Romantic ideal.

Rather than offering an analysis of his work, the following extracts from *Walden* are presented to speak for themselves as testimonies to Thoreau's personal philosophy.

Most of the luxuries, and many of the so called comforts of life, are not only not indispensable, but positive hinderances to the elevation of mankind. With respect to luxuries and comforts, the wisest have ever lived a more simple and meagre life than the poor. . . . None can be an impartial or wise observer of human life but from the vantage ground of what we should call voluntary poverty. . . . There are nowadays professors of philosophy, but not philosophers. . . . To be a philosopher is not merely to have subtle thoughts, nor even to found a school, but so to love wisdom as to live

according to its dictates, a life of simplicity, independence, magnanimity, and trust. It is to solve some of the problems of life, not only theoretically, but practically.

I am convinced, both by faith and experience to maintain one's self on this earth is not a hardship but a pastime, if we will live simply and wisely. . . . It is not necessary that a man should earn a living by the sweat of his brow, unless he sweats easier than I do.

We must learn to reawaken and keep ourselves awake, not by mechanical aids, but by an infinite expectation of the dawn, which does not forsake us in our soundest sleep. I know of no more encouraging fact than the unquestionable ability of man to elevate his life by a conscious endeavor. It is something to be able to paint a particular picture, or to carve a statue, and so to make a few objects beautiful; but it is far more glorious to carve and paint the very atmosphere and medium through which we look, which morally we can do. To affect the quality of the day, that is the highest of arts. Every man is tasked to make his life, even in its details, worthy of the contemplation of his most elevated and critical hour.

He is blessed who is assured that the animal is dying out in him day by day, and the divine being established. (Thoreau, 1981, pp. 115–16, 158, 172, 268)

These brief extracts from *Walden* offer an insight into Thoreau's character as a human being living in the middle of the 19th century in New England. From his youth, he shunned conventional society, disappointing his good friend Emerson by not pursuing a career and employing in a "constructive" manner his many gifts. Instead, he chose to live independently and as simply as possible.

The documentation of his hermit-like existence for two years on Walden Pond has offered contemporary readers a guide for their own efforts to simplify their lives. In many ways, the ethic presented in *Walden* is the epitome of an ecologically sustainable lifestyle. However, like many expressions of Romanticism, it is only an ideal. Although throughout *Walden* and elsewhere in his writings, Thoreau exhorts his readers to apply in their own lives the notions of a simpler lifestyle, such a "Romantic" existence seems increasingly impossible to achieve in contemporary Western society. The individualism and independence that characterize the Walden experience are also not necessarily constructive options for those who try to apply moral and spiritual principles in their efforts to unify humanity and improve the conditions of existence for themselves and the generations to come. Withdrawal from modern society may be an attractive option for

some, but it is not a constructive means of effecting the transformation required to improve social conditions for all human beings and the sustainable use of the natural resources with which the earth is endowed.

This shortcoming in the Romantic ideal is a major component in the critique of this philosophy. Despite the critique, Romanticism offers a profound source of inspiration for those who would eschew the trappings of contemporary society in favour of a lifestyle more in harmony with the rest of creation. Indeed, following Botkin's historical development of three views of nature over time (i.e., divinely ordered, organic, and mechanical) (1990), Romanticism can be seen as a "last gasp" attempt to preserve the organic view in modern times. Although maintained in small pockets of society for the next several decades, especially in North America, the organic view of nature would not appear in a profound form until well into the 20th century with the emergence of the Gaia hypothesis and deep ecology in social debate. For the most part, the 19th century would build on the achievements of science, seeking more technological, or at least, less explicitly spiritual, approaches to nature. As will be seen in the next section, there were those in the 19th century who, rather than emphasizing the organic nature of the universe, human beings included, expressed their concern for nature by condemning humanity's devastating impact on the planet and calling for more broad based solutions to the crisis.

One Important Alternative to 19th-Century Romanticism

During the late 18th and early 19th centuries, there occurred an increasing fragmentation of thought regarding nature. The Enlightenment had already challenged the authority of the Catholic Church as the sole source of knowledge regarding human behaviour, thus laying the foundation for the development of other "unorthodox" views regarding nature and humanity's relationship with it. "When . . . unmistakable evidences that undesirable changes in nature were made by man began to accumulate in great volume in the eighteenth and nineteenth centuries, the philosophical and theological underpinnings of

the classical, and later of the Christian, idea of stewardship were threatened" (Glacken, 1967, p. 149). Sensitive and spiritually minded writers adopted attitudes that became known as "Romantic." These writers and thinkers laid the foundations for the "holistic" visions that shape some environmentalists' views today. However, not all 19th-century writers emphasized the organic interrelatedness of creation. Despite demonstrating the same sensitivity to the destruction of nature manifested by the Romantics, this other approach focused on the distinctions between human beings and the rest of creation that had allowed such destruction to occur. "Castigations" of human disruption of natural balances through misuse, overuse, and abuse of the resources placed at our disposal culminated in the 19th century with the publication of G. P. Marsh's *Man and Nature*.

George Perkins Marsh (1801–82) was a lawyer from Vermont and seems to have been a gifted geographer. As a witness to the devastating effects of human interactions with nature, Marsh offered a view that was in sharp contrast to his Romantic contemporaries and current advocates of deep ecology: "The fact that, of all organic beings, man alone is to be regarded as essentially a destructive power, and that he wields energies to resist which, nature—that nature whom all material life and all inorganic substance obey—is wholly impotent, tends to prove that, though living in physical nature, he is not of her, that he is of more exalted parentage, and belongs to a higher order of existences than those born of her womb and submissive to her dictates" (Marsh, 1965, pp. 36–37). Rather than embracing a view that human beings are inherently in harmony with nature, Marsh emphasized and focused on those aspects of humanity that set it apart from the rest of creation, thereby endowing human beings with not only a greater capacity for destruction but also a greater responsibility in controlling that capacity. Marsh also rejected the notions of environmental determinism that were beginning to be voiced at the time (Glacken, 1956, p. 81).

Sensitive to cultural differences, however, Marsh recognized a distinction between what he called "civilized" and "primitive," nomadic and pastoral impacts on nature:

"Purely untutored humanity, it is true, interferes comparatively little with the arrangements of nature, and the destructive agency of man becomes more and more energetic and unsparing as he advances in civilization, until the impoverishment, with which his exhaustion of the natural resources of the soil is threatening him, at least awakens him to the necessity of preserving what is left, if not restoring what has been wantonly wasted" (1965, pp. 39–40). Marsh also made a sharp distinction between human and animal destructive practices:

It has been maintained by authorities as high as any known to modern science, that the action of man upon nature, though greater in *degree*, does not differ in *kind*, from that of wild animals. It appears to me to differ in essential character, because, though it is often followed by unforeseen and undesired results, yet it is nevertheless guided by a self-conscious and intelligent will aiming as often at secondary and remote as at immediate objects. The wild animal, on the other hand, acts instinctively, and, so far as we are able to perceive, always with a view to single and direct purposes. (1965, p. 41)

Marsh demonstrated a profound respect for and recognition of the powers of nature, the benefits to be achieved when humans work with her, and human futility in withstanding those powers should they choose to work against them:

Nature sometimes mocks the cunning and the power of man by spontaneously performing . . . works which he shrinks from undertaking, and the execution of which by him she would resist with unconquerable obstinacy. A dangerous sand bank, that all the enginery of the world could not dredge out in a generation, may be carried off in a night by a strong river flood, or a current impelled by a violent wind from an unusual quarter, and a passage scarcely navigable by fishing boats may be thus converted into a commodious channel for the largest ship that floats upon the ocean. (1965, p. 438)

Geographer David Lowenthal sums up Marsh's distinction from his Romantic contemporaries, especially Henry David Thoreau, with the following point that, "unlike Thoreau, who also loved nature, but wished to keep it wild, Marsh wanted it tamed; Thoreau appealed to esthetic sentiment, Marsh to economic practicality" (1953, p. 212). In this characterization, Marsh epitomizes the stereotypical 19th century American attitude as much as Thoreau typified English Romanticism despite, or perhaps because of, his New England home. Lowenthal has described *Man and Nature* as "revolutioniz[ing] environmental thought" in the 19th century (1990, p. 122). Lowenthal's interpretation of

the changes that occurred during this period in history emphasizes the shift in attitude that took place between the 18th and 19th centuries, especially as witnessed by early settlement in North America. Whereas the early American settlers sought to transform/improve/tame the “chaotic” and “dangerous” wilderness that characterized the North American landscape of the 1700s, observers of the devastation and destruction of previously “pristine” landscapes called for preservation and conservation. However, these early environmentalists could not stem the wave of industrialization that swept across the Western world in the 19th century, with the result that the new millennium dawned with the “modern” notion of technology as the “saviour” of civilization. Lowenthal summarizes the legacy of the industrial revolution as follows:

In sum, the concept of nature as an unfinished fabric to be perfected by human ingenuity gave way to the view that technology debased nature and endangered its beneficence. Environmental interference was anathemized, the wilderness venerated. In the state of nature envisioned by the Enlightenment, by Marsh, and by his technocratic successors, rational managers would cultivate an ever more artificial environment. In the state of nature sought by twentieth-century ecological reformers, human impact would dwindle until the environment recovered stability. (1990, p. 124)

The Fragmentation of Environmental Thought

The 20th century began with more ideas and theories competing for supremacy in the Western world than in any period in history. Along with the spiritual and metaphysical expressions of the Romantics and other expressions of “environmentalism,” many scientists were grappling with notions such as environmental determinism as a response to Darwinian thought.

In the 19th century, a new field emerged out of the work of Lamarck and others in the natural history sciences, leading eventually to Darwin’s “Beagle” voyages and the development of evolutionary theory as we know it today.⁴⁹ Although unknown at the

⁴⁹ There is still debate over the influence of Lamarckian theory on Darwin’s theories of evolution since Darwin himself both rejects and reinforces Lamarck’s work at various times in his career (Barber, 1980). For a detailed account of how early geography in Britain and the United States was influenced by Lamarck’s impact on the natural sciences, see Campbell and Livingstone, 1983, and Livingstone, 1984.

time, these works actually formed the scientific foundations for the modern environmental movement. The data collected by these scientists and their observations of the natural world provided an empirical body of evidence. Many yielded to specific influences at the time, becoming more reductionist in their work in sometimes futile attempts to gain the recognition of their contemporaries. "[I]t was characteristic of the period that the idea of presenting any general theory was one to induce extreme nervousness and a fear of ostracism from the scientific community. . . . [M]ost naturalists felt quite rightly that it was safer to stick to detail than to make any attempt at synthesis" (Barber, 1980, p. 65). There was strong pressure to eliminate any mention of non-scientifically verifiable data from observations of the landscape. As will be seen in Chapter 3, geographers were among the few who managed to maintain a fair amount of diversity in their range of interests; however, the legacy for the discipline in the face of the academic compartmentalization that took root in the 19th century may be a loss to more specialized fields like geology and urban planning of some of geography's better scholars.

The early 20th century is characterized by a fragmentation of viewpoints as the academic disciplines focused on their respective specializations. The integrative and eclectic pursuits of the classical philosophers, the critics of the pure rationalism of the Enlightenment period, and Romantic visionaries would gradually fade away in an atmosphere of scientific inquiry dominated by reductionism and positivism. In only a few exceptional cases, did academia have anything concrete or insightful to offer in the natural sciences. And the public was more concerned with crises considered more serious than the destruction of the natural environment. In a half century that witnessed two World Wars and the Great Depression, the driving influences in Western society were focused on rebuilding countries devastated by war and economic collapse.

However, the Romantic ideals of the previous century were never completely forgotten and indeed had begun to be established in very concrete ways through the

formation of conservation organizations⁴⁰ such as John Muir's Sierra Club and the Audubon Society, and, as will be seen in the next section of this survey, a new ethic was about to emerge that would represent the catalyst for a new field in academia that would have (and still has) the potential to unite the sciences and the humanities.

The Land Ethic

As one moves through the 20th century, the content and nature of academic works on environmental thought begin to develop a more ethical tone, building upon, or in some cases, rejecting the empirical foundations of science. Taking their cue from the Romantics of the 19th century, especially Thoreau and Emerson, many contemporary writers, rather than simply discussing the historical context of environmental thought, have shared normative insights in their work, thus giving birth to the field of environmental ethics. Some integrate the empirical and the normative in their analysis. René Dubos' attempt to reinforce the scientific foundations of ecological perceptions is an important contribution to the modern debate and, although White, Dubos, and others have offered insights that were later described as significant landmarks, the work that has had the most crucial impact on the fields of environmental ethics and environmental studies preceded their efforts by two decades. Contemporary academics now refer to Aldo Leopold's "The Land Ethic," an essay contained in his celebrated *A Sand County Almanac* (1949), as the first real attempt to articulate a modern environmental ethic.

J. Baird Callicott refers to Leopold's "The Land Ethic" as "the first self-conscious, sustained, and systematic attempt in modern Western literature to develop an ethical

⁴⁰ In an article that analyzes the development of conservationism in the United States, Clayton R. Koppes (1988) follows the themes of efficiency, equity, and esthetics as they were reflected in various policies of the U.S. government throughout this century. The graphic image Koppes' description and analysis inspired for this writer is a three-part Venn diagram with each circle representing one of the three themes with occasional overlapping among all three or two of the three. An ecology element is added to the esthetic theme when Aldo Leopold enters the picture (see below for Leopold's crucial contribution to the development of Western environmental thought). The relative predominance of a theme as it pertained to a specific event or government mandate is portrayed by the proportional sizes of each circle. The sense one gets from Koppes' article is of an almost continuous dominance of the efficiency circle over the other two, indicating the economics driven nature of U.S. society.

theory which would include the whole terrestrial nature and terrestrial nature as a whole within the purview of morals" (1987, p. 157). Although most philosophers have ignored "The Land Ethic," criticizing it for its non-philosophical style of prose, its departure from contemporary ethical concerns, and its radical practical implications, and some environmental philosophers have condemned it, most environmental philosophers concur with Callicott's assessment. Other views are expressed by Anthony Weston, who states, "It might be better to regard Leopold not as purveying a general ethical theory at all, but rather as simply opening some questions, unsettling some assumptions, and prying the window open just far enough to lead, in time, to much wilder and certainly more diverse suggestions or 'criteria'" (1992a, p. 333). Jim Cheney suggests that rather than viewing the land ethic as a *universal* norm which may have been developed by Leopold out of his life and work, we should "try to understand it as inflected by historicity, as *essentially* tied to place and Leopold's narrative embedment in, and understanding of, the sand counties of Wisconsin" (1989, p. 125).

A Sand County Almanac is a collection of essays about the environment surrounding Leopold's home in Wisconsin. The book in general and the land ethic essay in particular represent the author's attempt to articulate his concerns regarding the way in which the United States' natural resources were being managed at the time. As a conservationist and forester employed by the U.S. government, Leopold was in an ideal position to react constructively to the situation. The essay combines poetic, ethical, and descriptive styles of expression, resulting in a piece of literature attractive to a wide audience:

In general, the trend of the evidence indicates that in land, just as in the human body, the symptoms may lie in one organ and the cause in another. The practices we now call conservation are, to a large extent, local alleviations of biotic pain. They are necessary, but they must not be confused with cures. The art of land doctoring is being practiced with vigor, but the science of land health is yet to be born. (1989, pp. 195-96)

The land ethic essay begins with a general discussion of ethics, with Leopold's remark that there was as yet no ethic to handle human relations with natural resources

except through economic transactions. Indeed, as shown earlier in this chapter, there was sufficient sanction to pursue noneconomic means of dealing with nature; humanity had simply chosen another path. Leopold criticizes a conservation system based solely on economic self-interest as "hopelessly lopsided" (1989, p. 214) and calls for a more ecological and spiritual approach based on understanding of the biotic system and love, respect, and admiration for the land and its noneconomic value. This essay contains the oft quoted statement: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise" (p. 224).

Taken on its own, "The Land Ethic" offers a positive ethical foundation upon which to base conservation, preservation, and management programs. However, its inclusion in *A Sand County Almanac* reveals at least one puzzling contradiction. In another essay in the volume, "Wildlife in American Culture," Leopold presents a confusing jumble of ideas that simultaneously condone (and indeed, seem to glorify) sport hunting, lament the mechanization of the sport, thus reducing its value, and call for more wildlife research.⁴¹ In this respect, Leopold epitomizes the character of many recreational hunters, individuals who are motivated to conserve a wildlife area in order to preserve their hobby.⁴²

However, placing this criticism aside for the moment, Leopold has definitely earned his place in 20th-century history for presenting the first critical examination of the dominance of economic forces in human relations in the natural environment and an ethical and ecological alternative. Leopold's ideas have provided the foundation for the sub field of moral philosophy that has been called environmental ethics. Although as a formal field of inquiry it did not appear until the 1970s, its roots, as we have seen, reach back over two thousand years. The field is characterized by a plethora of philosophical approaches to the analysis of the environmental crisis.

⁴¹ Thanks to Professor Wendy Donner for bringing this point to my attention.

⁴² One feels compelled to speculate on how the fortunes of organizations such as Ducks Unlimited (founded by duck hunters), which are visible promoters of the preservation of wildlife areas, might fare if the general public was more aware of the underlying motivations of their activities.

Before moving on to geographical contributions to these themes, this chapter concludes with a cursory overview of the ideological influences that currently shape the West during this last decade of the 20th century. The use of a more reflective voice in the following section is intended to set the discussion more clearly apart from the preceding coverage of the history of environmental thought. The shift in approach is intended to stress the fact that the following overview is shaped primarily by my observations of the current state of Western society based on many of the principles discussed in Chapter 1. The factor from that chapter which has the most influence in the tone of the discussion is the active detachment and context awareness expressed in the "Thinking Like a Mountain" section. The language used is intended to demystify many of the notions currently driving contemporary Western society.

What "Man" Hath Wrought

The year is 1994. The place is the continent called North America by English speaking members of the human race. The continent is divided by political boundaries that follow lines of latitude and longitude, and rivers and other features of the natural environment. The boundaries also divide large bodies of water (most notably in what are called the Great Lakes) and are, essentially, abstract symbols used to designate territory and which seem to have been created by people who have ignored the morphological features that comprise the physical geography of the continent. A major political boundary separates from east to west the two countries that dominate this land mass, thus almost bisecting the north-south direction of its primary physical features such as the Western Cordillera, the Great Plains, and the temperate forests on the eastern half of the continent. This boundary and those that subdivide the countries into smaller political regions are seen by some people as counter-productive to the goals of individuals and organizations motivated by ecological consciousness and by concepts such as global citizenship and world unity.

Superficially, the ideologies that shape the two dominant countries are fairly similar; however, at a deeper level they manifest themselves in different ways. The following discussion focuses on the dominant influences that shape political, economic, and social thought in North America. These ideas are not limited to this continent; they are also manifested in various forms in several other countries, primarily those in which the ancestors of many of North America's current inhabitants were born. (These ideas do *not* reflect the culture and ideology of the continent's original human inhabitants, but the discussion of that facet of the story would take this overview far beyond its stated aim.) Increasingly in the contemporary era, these ideas are also spreading throughout the world as the basic tenets of North American ideology are transmitted as a result of increasingly effective and efficient systems of communications, transportation, and technology and of the hegemonic status of this particular civilization.

Politically, the society is based on a concept known as "liberal democracy." Although practiced in the two countries in different ways, the basic principles, at least at the abstract level, are shared. The governments are based on a multi-party partisan system that allows for representation of various political views that are said to reflect those of the general population. Adult citizens are entitled to one vote each in elections that take place fairly frequently (usually every four to five years). The frequency of the elections is designed to ensure that no particular political party enjoys a long-term, sustained hold on power without the continued support of a majority of the population. This multi-party, one-person-one-vote system is designed to prevent the potentially nasty effects of military or totalitarian dictatorships and other forms of authoritarian rule in which one individual or group of individuals assumes absolute authority over the people. Liberal democracy is viewed by its advocates as the ultimate protection of the rights of the individual, ensuring freedom and security for all. Ideally, and certainly in the minds of those who have contributed to its formulation, such an aim is not only commendable but also essential as a central principle in "civilized" societies. In practice, seems only achievable in a system

devoid of greed, graft, corruption, unfettered ambition, and lust for power. Those who usually get elected possess a fair amount of charisma and eloquence or have a personal or professional connection with those already in power. The ethical principles upon which liberal democracy in its original conception was based are not generally cultivated in or by the systems in which it is practiced, thus allowing injustice, incompetence, and immorality to fester in its institutions.

Economically, this society is driven by what is known as "capitalism," a system characterized by private (individuals or groups of individuals called corporations) ownership of "goods" that are allowed to move freely without interference by the government or "state." The central principle underlying the pricing, movement, and distribution of these goods is competition. Ideally, the system is viewed as the best means by which individuals can "profit" from their labour, thus generating wealth and well-being. In practice, this system converts virtually every human endeavour into a good or commodity, even social services such as health care and education. The result is that people with more wealth have greater access to "better" basic goods and services than those with less. Inextricably linked with capitalism is advertising, which acts as an agent for those trying to sell their goods and services. Advertising uses various forms of the media to transmit its messages and encourages the public to buy this product or that service, whether they can afford or want it or not. Large scale advertising is very competitive and only the companies that can really afford it usually use it. Thus, advertising enables rich companies to get richer by assisting them in "educating" the public about their product. Smaller companies gradually decline because they cannot afford the advertising space or time, thus losing what is called their "market share" (the number of people who may buy the product), and eventually going bankrupt.⁴³

43. For an overview and critique of the prevailing economic model and their concept of an "ecological alternative," see Birch and Cobb, 1981, pp. 267-73. See also Daly and Cobb, 1989.

Socially, the effects of both the political and economic systems manifest themselves in numerous ways. As noted above, services generally perceived under liberal democracy as being essential in maintaining basic standards in human well-being, such as health and education become commodified in a capitalist system. In a country that amends the liberal democratic system with "socialist" practices such as universal health care and state-run or subsidized educational institutions, some of the more debilitating aspects of capitalism are lessened somewhat. However, in 1994, for a variety of reasons too complex to discuss here, even that effort is beginning to fail. Another aspect of the social system that stems directly from liberal democracy is the legal or justice system, which is designed to protect the rights and ensure the safety and security of law abiding citizens. This system also seems to suffer from many of the negative consequences of capitalism and the political applications of the ideals of liberalism. The vast proportion of those hired to interpret the law for citizens who need and enlist their aid are also driven by the competitive ethic underlying the capitalist system, rather than the higher ideals that led to the formation of the justice system in the first place.

The result is a society governed by a system and institutions that are failing to do in practice what they are intended to do in theory. Over the decades, the individuals operating from within the system have managed to entrench programs and patterns that create the impression that the system is unchangeable. The different facets of economic, political, and social life in this civilization are so interconnected and intertwined that even radical attempts at reform are failing to accomplish their stated aims. Many impassioned and ethically motivated individuals have been either seduced by or driven away from the system. And as time goes by and one band-aid effort after another fails, people become frustrated and disenchanted with the prevailing institutions and ideologies that shape their lives. They begin to seek alternatives to the status quo.

In 1994, the alternatives greatly outweigh the conventional system in diversity and depth of critique. If they were united, they could easily topple the crumbling

infrastructure. In their current fragmented form, they are making progress, but it is slow, piecemeal, and, at times, frustrating. It is beyond the scope of this thesis to describe in detail any of these alternatives nor is it possible to list them all. I will confine my remarks to 3 movements: feminism, which has caused all of Western society to examine with a more critical eye than ever in its history the foundations of its beliefs; a diverse and fragmented reaction against the "modern" agenda that has driven Western society for at least two centuries; and a wave of heightened awareness in intangibles and invisibles that forms the foundation for a convergence of many systems of belief.

Taking off in its most comprehensive and activist form in the 1970s, feminism has challenged each individual to recognize the blindness that has enabled human beings to suppress in various forms and degrees half of the species for most of the last three millennia. The movement had been simmering for centuries, making brief and incremental progress, gradually increasing in power until it was catapulted into action never to be grounded again. Like a less than well tuned airplane, feminism has had serious mechanical difficulties and has gone wildly off-course from time to time over the years, some of which problems were consequences of major errors made by its pilots, engineers, and navigators. For the most part, it has been a necessary and great assistance in propelling humanity forward toward greater unity. The recognition and application of the fundamental principle of the inherent equality of women and men are absolutely imperative for the peaceful cohabitation of both members of the species. In terms of the environmental issues being dealt with in this thesis, many ecofeminists offer compelling insights into the historical roots of and solutions to the numerous problems that comprise the contemporary ecological crisis. Various expressions of feminist spirituality offer inspiration for alternatives to the traditional forms of "organized" religion.

The second movement, post-modernism, is much more difficult to characterize. Like feminism, it is a reaction against the prevailing system. Emerging originally in the visual arts, especially in architecture, post-modernism is essentially (if there is any essence to it)

a rejection of the modern attachment to grand, universally applicable theories. It represents a questioning of the basic principles that drove the Enlightenment thinkers. Some have described its purpose as "a desire to create a new intellectual and physical environment for human existence" (Unwin, 1992) by challenging the inherited tenets of modernism. Elsewhere, post-modernism is described as "basically a revolt against the rationality of modernism. . . . In practice, postmodernism has taken the form of a revolt against the too-rigid conventions of existing method and language. It has attacked the intellectual conditions which allow for and tolerate the dominance of one discourse over another" (Dear, 1988, p. 265).⁴⁴ At its best, post-modernism offers an intellectual context for the numerous voices clamouring for expression in the increasingly complex forum that represents social thought. At its worst, post-modernism descends into anarchistic relativism in which "anything goes." It is much too soon in the movement's history to determine whether it is simply a temporary manifestation of a paradigm shift currently underway in the West or if it represents the new paradigm that will emerge out of the critique and rejection of old and no longer applicable theories. The former is probably more plausible an explanation than the latter. The diversity without unity that characterizes post-modernism is, in my opinion, the fundamental hindrance to its sustainability as an enduring social phenomenon beyond the current confusion.

This point leads to the third and final offering in this overview of alternatives to the prevailing ideology and which may offer the greatest potential for not only moving Western society beyond its current malaise but also eventually uniting the whole world into one global community. The awareness in many social movements and individuals from all areas of society of the necessity for recognizing the inherent spiritual essence of

44. Dear rejects post-modernism as "profoundly destabilizing and potentially anarchic," proposing his own reconstruction of human geography through its links with social theory as the central and, to Dear, only relevant force in the social sciences. A more ecological view is offered by Ron Bordesca, whose concern for nature is "at the heart of [his] construction of postmodern society, a view which necessarily also places nature within the domain of moral consideration as a stakeholder. In postmodernity, nature is reconceptualized as holding a rightful claim on the moral sensibilities of human beings, and thereby escapes from reliance on the appeal to human benevolence" (1993, p. 150). For other recent contributions by geographers, see Cosgrove, 1990 and Livingstone, 1990.

being human is manifesting itself in a convergence in thought around a detachment from the material condition of human existence and a pursuit of less tangible but more durable features in one's life. This awareness still reflects itself in diverse ways in the form of increased participation in fundamentalist denominations within the world's universalist religions, the success of television evangelism, and various manifestations of and movements within what is called "New Age" spirituality. The movements that achieve short-term success are largely supported by individuals desperately seeking answers to questions no longer answered by secular society. Some of these movements or individuals offer the seekers "quick fixes" or "painless" remedies. Others offer healing methods or therapy programs that treat spiritual, emotional, psychological, and/or physical ills. In both these cases, the organization or service treats a symptom or collection of symptoms, but does not necessarily offer solutions to the larger problems that underlie and have caused the malaise. Those religions or religious movements that will endure offer a comprehensive theoretical and practical framework for reorganizing human society to allow each individual to develop his or her spiritual and physical potential. They are open to critique and analysis, actively cooperate with other like-minded organizations, and have an incorruptible integrity that protects them from internal schisms that undermine their basic foundations.

The convergence in thought mentioned above is inherent in the concept of unity in diversity that underlies this thesis. The unity is at the spiritual level in the recognition and promotion within each individual of those qualities that will further their own spiritual growth and that of the entire species. The diversity occurs as the recognition of the vibrancy of each human culture is manifest and the numerous expressions of individual creativity and imagination as they are inspired by a unifying spirituality are allowed to flourish. Some of the ways in which this spirituality is being applied to the environmental crisis will be explored in Chapter 4 and spiritual principles upon which a global sustainable environmental ethic might be based will be examined in Chapter 5.

2

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PRECISIONSM RESOLUTION TARGETS

Summary

This chapter has traced the development of Western environmental thought through time and space from the ideas of thinkers in ancient Greece to the contemporary foundations for the field of environmental ethics, that is, Aldo Leopold's land ethic. Without this overview of the change in worldviews that took place in post-feudal society, it is hard to explain contemporary Western

almost universal concerns with money, competition and material consumption; we are bombarded with them daily, on all sides, from birth onward. We believe this is how people normally are, that these are the major concerns of "human nature." . . .

. . . Individualism, materialism, and competitiveness are nurtured in us, woven implicitly into the very fabric of our worldview. And once accepted, this view of course tends to create the very kind of human behaviour that it assumes is inevitable. . . . [O]ur worldview becomes its own self-fulfilling prophecy. (Clark, 1989, p. 270)

This basic fact of human existence is also the key to our "salvation" from ourselves. If such a self-destructive worldview can have such an impact, imagine the consequences of the peoples of the world adopting a worldview that advocates compassion, mutual love and respect, and sacrifice for others less fortunate than oneself. Imagine the possibilities of a world in which the political and economic system explicitly and actively pursues the well-being of all peoples regardless of their colour, sex, age, or geographical residence or roots. Imagine the possibilities of a global system founded upon principles of justice, equality, and the peaceful resolution of differences, in which science and technology are used to heal rather than to destroy, to lessen extremes of wealth and poverty rather than to widen them, and to render impotent the institutions that currently perpetuate a disproportionate hold on power and wealth. And since science alone does not hold exclusively all the answers, moral and spiritual forces could regain prominence in human society, offering guidance in those areas where mere reason alone is insufficient.

It is apparent that human attitudes have had a profound and at times devastating impact on the natural environment. At various times in history, the intellectual, artistic, and religious élites have been sensitive to this fact, fostering attitudes that reflect a more

sensitive understanding of the interconnectedness of human and nonhuman creation. The most profoundly spiritual expressions can be seen within specific religious orders during the Middle Ages, by proponents of natural theology from the 17th century on, and by contributors to Romanticism. The ideas and morals advocated by members of these groups have provided the inspiration for many contemporary environmental movements.

The Scientific Revolution and the Enlightenment mark a significant watershed in the development of Western thought. Environmental attitudes have been significantly shaped by the desacralization of nature that took place in the 1700s. The dominance of secular humanism and the “modern scientific method” in Western society since that time have perpetuated a misconception that religion and science are incompatible, that religion breeds mindless and blind faith, and that knowledge can only be gained by a value-free application of rational thought. The result has been the fostering of a blind attachment to science rather than religion as the ultimate means to deal with and solve humanity’s problems. One of the central themes repeated throughout this thesis is the inherent harmony between science and religion. Beginning especially in the mid-18th century, the necessary balance between the two has been repeated by scholars in many fields. As humanity witnesses the devastating effects of the schism between these two essential streams in human existence, perhaps for the first time in history, this essential principle can become part of the public psyche instead of merely an idealistic reflection on the part of some individuals.

The next chapter makes explicit the important contribution that geographers have made to environmental thought in this century and the capacity within the discipline to be at the forefront of such analysis well into the next century and beyond.

Chapter 3

What's Geography Got To Do with It?

As geography begins to take stock of the now wide and pressing issues of human-environment relations, whether physical or conceptual, there is here a complex precedent from within our own discipline, and from not that long ago, which would seem to cut across and perhaps demand rethinking of the current terms of debate regarding nature and the modern, and by implication nature and the post-modern.

—David Matless

Beyond that of any other discipline, . . . the subject matter of geography approximates the world of general discourse; the palpable present, the everyday life of man on earth, is seldom far from our professional concerns. . . . More than physics or physiology, psychology or politics, geography observes and analyzes aspects of the milieu on the scale and in the categories that they are usually apprehended in everyday life. Whatever methodologists think geography ought to be, the temperament of its practitioners makes it catholic and many-sided. In their range of interests and capacities—concrete and abstract, academic and practical, analytic and synthetic, indoor and outdoor, historical and contemporary, physical and social—geographers reflect man generally.

—David Lowenthal

In 1965, Lowenthal and Prince examined English landscape tastes, drawing their material from the repeated expressions of attitudes toward certain types of landscapes. Their article was a reflection of the opinions of those who had created English landscape taste and molded the landscape itself and was a concrete expression of the type of geography that each of them had been calling for a few years earlier—a geography that focused on human tastes and values and on how humans transform the physical environment around them (see especially Lowenthal, 1961). This chapter offers an overview of how different representatives of the discipline of geography have expressed their views on just that: how human values transform the physical environment around them. Lowenthal and Prince's article also offers an historical context for the discussion, which takes us back over one-hundred years. Before starting that discussion, it is

important to reiterate how the present chapter fits into the overall theme of the thesis, which is largely grounded in environmental ethics.

A survey of environmental ethics from a geographer's perspective yields a diversity of responses. On the one hand, the geographer, as a scientist interested in exploring the relationships between human beings and their physical surroundings, might be attracted to the depth of attention paid to land, other natural resources, and non-human creation by a wide range of philosophical perspectives and scientific theories such as the Gaia Hypothesis and movements such as deep ecology and ecofeminism. On the other hand, a geographer might find it difficult to distill the essential message being presented by many of the writers contributing to the dialogue. For the most part, the philosophers contributing to environmental ethics have dealt in the abstract, making only occasional reference to empirical research. Most social and physical scientists have focused almost exclusively on the empirical foundations of their research, neglecting more metaphysical, ethical, or spiritual facets of their individual fields. In many fields, the explicit inclusion of such elements in one's publications might seem either unnecessary or irrelevant. However, as noted in the introduction of this thesis, geographers especially need to address not only the physical landscape and environmental issues arising from human relations with that landscape but also the ethical aspects of those relations.

This chapter offers a synthesis of geographical contributions to the environmental debate, especially those few contributions that explicitly address moral or spiritual issues. There appears to be growing interest in environmental ethics among geographers involved in such areas as environmental impact assessment, environmental management and policy, and sustainable development. This interest is, however, not new to geography.⁴⁵

45. It is, of course, impossible to offer a totally comprehensive treatment of every geographer who has produced material relevant to this discussion in a work of this length. Significant absences include Alexander von Humboldt (1769-1859) and Carl Ritter (1779-1859), almost universally recognized as the founders of geography; Vidal de la Blache (1845-1918), whose special "brand" of geography in France is still seen as a model for some contemporary scholars; Arnold Guyot (1807-1884), the first professor of geography at Princeton from 1854, who receives only a brief mention; Friedrich Ratzel (1844-1904), widely considered the founder of environmental determinism; Ellen Churchill Semple, who brought Ratzel's ideas to the United States; Nathaniel Southgate Shaler (1841-1906), who developed the ideas put

Rediscovering Geography's 19th-Century Roots

Driver identifies three views of the roots of modern geography: (1) the scientific revolutions of the 16th and 17th centuries (Livingstone, 1990); (2) the philosophers and geographers of the Enlightenment (Glacken, 1967); and (3) the academic institutionalization of the late 19th century (Driver, 1992).⁴⁶ The first two views are largely coincidental since the Enlightenment and the Scientific Revolution essentially occurred simultaneously and sometimes share the same thinkers in historical analysis. Driver's thesis that the main roots of geography as an academic discipline are in the 19th century when academic compartmentalization largely took place also has merit. However, one's attraction to any perspective is largely based on one's own personal views of what "geography" means and what constitutes its mandate. As will be shown below, several geographers who were widely honoured and respected in their time have been lost to the history books and the weathered and faded pages of the early volumes of geographical journals and their own out-of-print publications. Some might say that recapturing their work in contemporary scholarship is merely an attempt to justify one's own perspective as relevant because a few scholars who called themselves geographers explored many similar themes. However, given the criticism of the ways in which geography has developed over this century and the current appeals from mainstream society for constructive solutions to modern problems, analyzing the history of our discipline for relevant alternatives to the orthodox streams of "traditional" 20th century geography seems essential at this stage. Despite the fact that some of the early scholars about to be discussed (and many of those not included) have been somewhat marginalized, they offer many insights into the practice of science and the social problems of their own time that may be relevant in dealing with our own crises.

forward by George Perkins Marsh; and William Morris Davis, an early proponent of unification between the human and physical approaches within the discipline.

46. The two issues of *Society and Space* that feature the series in which Driver's article appears further reinforce Relph's contention, cited in the introduction of this thesis, regarding the lack of "environmental" content in contemporary discussions of post modernism by geographers.

Before proceeding further, it is important to recall one scholar who did not practice geography professionally—an impossible endeavour at the time of *Man and Nature's* publication since the discipline as a formal academic stream had not yet been “created.” As mentioned in the previous chapter, George Perkins Marsh was a lawyer and an amateur geographer who produced one of the few compelling and comprehensive treatises on the impact of human activity on the natural landscape ever attempted before or since. Although usually not cited for any profound philosophical insights into human nature, his work is nonetheless included in most contemporary works that attempt to incorporate some understanding of how geography reached the current stage of its development. “Marsh did more than make a plea for conservation; he gave the world a deeper insight into the nature of human history. Our greatest debt to him is that he studied the technical works of European foresters, meteorologists, agronomists, drainage engineers and hydrologists, botanists and plant geographers, and scientific travelers and for the first time placed the results of their investigations where they belonged—in the forefront of human history” (Glacken, 1956, p. 83). Marsh is mentioned again here because his work marks an important historical watershed for geographical analysis of human beings and their impact on the natural landscape. Few scholars before him offered as penetrating an insight into the destructive capacity of humans to alter profoundly and permanently the environment in which they choose to live. His speculations on the future were also remarkably perceptive:

The earth is fast becoming an unfit home for its noblest inhabitant, and another era of equal human crime and human improvidence, and of like duration with that through which traces of that crime and that improvidence extend, would reduce it to such a condition of impoverished productiveness, of shattered surface, of climatic excess, as to threaten the depravation, barbarism, and perhaps even extinction of the species. (Marsh, 1965, p. 43)

All prognostications of gloom and doom for the human race aside for the moment, Marsh was not totally alone among those living during the 19th century who demonstrated an intense concern for human beings and the consequences of their actions.

Research undertaken at this end of the 20th century has revealed dozens of geographers who made their mark in the natural and social sciences over 100 years ago. Present-day historical geographers such as David N. Livingstone and David Matless have resurrected several geographers who demonstrated sensitive and penetrating insight into the world and its inhabitants. Much of Matless's work has focused on early 20th-century British geographers such as Patrick Geddes, Vaughan Cornish, and Sir Francis Younghusband, who represent a counter-point to some of the positivistic themes that have characterized many geographers' interests.

Livingstone has looked at the impact of Lamarckian thought and neo-Lamarckism on geographical research in 19th-century Great Britain and the United States, identifying many geographers who had difficulty accepting classical Darwinism, finding more relevance in the stronger emphasis on the role of environment in Lamarckian theory (1984, p. 17). Natural theology and its historical development provide the conceptual framework upon which Livingstone bases his research. Scientists such as A. H. Keane, Patrick Geddes, Mary Somerville, Arnold Guyot, Daniel Coit Gilman, H. R. Mills, George F. Wright, the Reverend Samuel Haughton, Joseph Le Conte, Sir John Lubbock, H. G. Seeley, T. C. Chamberlin, James Fairgrieve, Sir Clements Markham, James Geikie, Archibald Geikie, Clarence King, and Bailey Willis all attempted in varying degrees to reconcile the emerging and widespread adoption of evolutionary theory with their understanding of the world both in its physical and spiritual sense. For many, scientific study of the natural landscape was a means for gaining further knowledge and understanding of the Creator: "If we humbly and reverently study the works of Nature we shall apprehend something of the almighty power of the Great Designer" (James Geikie, quoted by Livingstone, 1984, p. 22). In *Elementary Lessons in Physical Geography*, Archibald Geikie described the purpose of science as being to reveal "more and more of that marvelous plan after which this vast world has been framed, to gain a

deeper insight into the harmony and beauty of creation, with a yet profounder reverence for Him who made and who upholds it all" (quoted by Livingstone, p. 22).

Arnold Guyot, Princeton professor of physical geography from 1854 to 1880, attacked the traditional "tabular and encyclopedic texture" of geography "as both scientifically barren and, in fact, descriptively sterile for want of an interpretative--comparative methodology. . . ." Guyot's critique was "undergirded by an organicist--ecological style of thought that emphasized the interrelationships, interdependence, and interconnections of nature" (Livingstone, 1984, p. 14). To Guyot, "All is order, all is harmony in the universe, because the whole universe is a thought of God: and it appears as a combination of organisms, each of which is only an integral part of one still more sublime. God alone contains them all, without making a part of any" (quoted from *The Earth and Man* [1897] by Livingstone, 1984, p. 14).

In 1876, during his inaugural address as the first president of John Hopkins University, Daniel Coit Gilman expressed his vision for marrying science and religion:

. . . religion claims to interpret the word of God, and science to reveal the laws of God. . . . It is more and more clearly seen that the interpretation of the laws by which the universe is governed, extending from the invisible rays of the celestial world to the most minute manifestations of organic life, reveal one plan, one purpose, one supreme sovereignty—far transcending the highest conceptions to which the human mind can attain respecting this sovereign and infinite Power. . . .

Still the work goes on. Science is recognized as the hand-maid of religion. (Quoted by Livingstone, 1984, p. 20)

Two early geographers who demonstrated this integration of science with more mystical human expressions, did so without the attachment to "organized" religion that many of their contemporaries manifested. Their insights into the spiritual essence of human existence and nature were, however, just as, if not more, profound than their more conventionally religious colleagues.

“Radical” Progenitors: Kropotkin and Reclus

It has been over one hundred years since this passage was published:

Geographers have especially contributed to destroy the screens which separated the two brands of sciences [social and physical], isolated from each other by the University. Humboldt's *Cosmos* is the work of a Geographer; and the geographical work which is most representative of our own times—the *Géographie Universelle* of Elisée Reclus gives a description of the Earth so thoroughly inter-mingled with that of man, that if man were taken out of it the entire work would lose its meaning—its very soul.

This growing tendency removes the last objection against natural sciences becoming the very foundation of education. Man, his institutions, his language, his knowledge and his morals, are now taken as parts of the great *Cosmos* and treated as such. (Kropotkin, quoted in Galois, 1977, p. 75)

Peter Kropotkin (1842–1921) was a geographer and an anarchist. He was deeply concerned with human behaviour and the impacts of that behaviour on the development of social institutions and the natural environment. He analyzed his observations of the natural and human landscape and devised his own social philosophy.⁴⁷ Like contemporary deep ecologists, he viewed nature as holistic and inherently moral. Nature was seen as the “first ethical teacher of man” (Kropotkin, 1924, p. 45). One essay, “The Moral Principle in Nature,” documented evidence from the animal kingdom as a model for human behaviour. Kropotkin perceived that despite the organic nature of human society—ever changing, ever striving to improve itself—the prevailing system allows atomistic forces to isolate and dissolve the connections between individuals and groups.

One of Kropotkin's most interesting observations was based on his critique of the interpretations of evolution theory. Kropotkin felt that Darwin's followers had interpreted the struggle for survival too narrowly, that the struggle for existence found in nature was not between individuals but rather was evidence of intra group cooperation. Within a species, individuals operate instinctively to ensure the survival of the entire species rather than from an instinct for self-preservation. Kropotkin felt that geography's interpretation of social Darwinism resulted in environmental determinism. Geographers at the time adopted the narrow interpretation of survival of the fittest and reinforced the

47. For a discussion of the common ground between Kropotkin's “ecosocialism” and *The Ecologist's* 1972 “Blueprint for Survival,” see Pepper, 1984, pp. 188–93

capitalist ethic based on individualism and competition as "natural" characteristics. To Kropotkin, however, this ethic is contrary to nature, especially in human society:

Moreover, it is evident that life in societies would be utterly impossible without a corresponding development of social feelings, and especially of a certain collective sense of justice growing to become a habit. If every individual were constantly abusing its personal advantages without others interfering in favour of the wronged, no society-life would be possible. (Quoted in Galois, 1977, p. 82)

Kropotkin developed his thoughts in this area in much of his work on the concept of "mutual aid," which he felt was a key factor in evolution.

Kropotkin was highly anti-religious, sharing Marx's assessment of the debilitating effects of such social institutions that distracted human beings from the true source of intellectual, moral, and spiritual inspiration:

If the study of Nature has yielded the elements of a philosophy which embraces the life of the Cosmos, the evolution of living beings, the laws of physical activity, and the development of society, it must also be able to give us the rational origin and the sources of the moral feelings. And it must be able to show us where lie the forces that are able to elevate the moral feeling to an always greater height and purity. If the contemplation of the Universe and a close acquaintance with Nature were able to infuse lofty inspiration into the minds of the great naturalists and poets of the nineteenth century, . . . why should not a deeper penetration into the *life of man and his destinies* be able to inspire the poet in the same way? And when the poet has found the proper expression for his sense of communion with the Cosmos and his unity with his fellow-men, he becomes capable of inspiring millions of men. . . . He produces in them those very ecstasies which were formerly considered as belonging exclusively to the province of religion. What are, indeed, the Psalms, which are often described as the highest expression of religious feeling, or the more poetical portions of the sacred books of the East, but attempts to express man's ecstasy at the contemplation of the universe—the first awakening of his sense of the poetry of Nature? (1924, pp. 5–6)

This passage synthesizes several aspects of Kropotkin's philosophy: his substitution of nature for religion as the inspiration for spiritual expression and moral insights, his perceptions of the inherent spirituality within humans and their capacity for improvement, and his passion for poetry, especially nature poetry. He frequently made reference to Romantic poets such as Byron and Shelley and felt that geographers in general could receive great wisdom from such expressions. By drawing from the art of nature poetry, geographers could capture the essence of the natural landscape more accurately than empirical description ever would. This idea was the base upon which his notion of

anarchy rested and which is akin to the current post modern ideal: "it understands all human faculties and all passions and ignores none" (quoted in Galois, 1977, p. 89).

Kropotkin was not the only geographer with anarchistic tendencies in late 19th century Europe. In 1877, he met Élisée Reclus (1830-1905), and the two geographers, according to one of Reclus' biographers, "took an instant liking for each other" (Dunbar, 1978, p. 86). Reclus was a widely known and respected geographer during his lifetime, producing works that were to form the foundations for a strong and vibrant contribution to the discipline from outside its more well-known roots in England and Germany.⁴⁸ Although exiled from his native France for his political beliefs, Reclus always maintained an emotional attachment to his mother country, writing almost exclusively in French despite his command of German, Italian, English, and some Russian. Like his mentor, Carl Ritter, and in contrast to his American contemporary, George Perkins Marsh (with whom he maintained a correspondence for several years, although they never met [Dunbar, 1978, p. 51]), Reclus perceived and emphasized in his writings the mystical connections between human beings and nature:

The developments of mankind are tied in the most intimate fashion with the natural environment. A secret harmony is established between the earth and the peoples it nourishes, and when imprudent societies permit themselves to lay a hand on what makes the beauty of their domain, they always end up repenting it. (Quoted and translated by Dunbar, 1978, p. 44)

Reclus' first great work, *La Terre*, published in two volumes in 1868 and 1869, offered a systematic documentation of the physical geography of the earth. In the following extract, taken from the final chapter of the second volume, "L'Océan L'Atmosphère—La Vie," and translated by one of his biographers, Reclus offers his perspective on the importance of human morality in the development and peaceful progress of the earth:

Science . . . shows us the means to embellish the earth's surface and to make of it the garden dreamed of by the poets of all the ages . . . [but] it alone cannot finish the great work. To progress in knowledge must correspond moral progress. . . . The traits of the

48. For a discussion of the state of geography in France prior to Reclus, see Godlewska (1989).

planet will not have their complete harmony if men are not first united in a concert of justice and peace. To become truly beautiful, the "beneficent mother" must wait until her sons embrace each other as brothers and until they have finally concluded the great federation of free peoples. (Quoted by Dunbar, 1978, p. 48)

Reclus continued this theme of human unification in *Histoire d'un ruisseau* (The Story of a Brook) (1869), a small book in which he integrated his unique perceptions of physical processes in nature (in this case, the hydrological cycle) with his emphasis on the moral value in appreciating the beauties of nature:

Peoples mix with other peoples like brooks with other brooks, rivers with rivers; sooner or later they will form a single nation, just as all the waters of the same basin finish by merging into a single river. . . . Humanity, until now divided into distinct currents, will be no more than a single river, and, reunited into a single flow, we will descend together toward the great sea where all life will lose itself and be renovated. (Quoted and translated by Dunbar, 1978, p. 52)

La Terre, an instant success in the French-speaking world, was eventually translated and published in English, thus broadening Reclus' audience and solidifying his place in the history of geographical thought. In an extract from the second volume *The Ocean, Atmosphere and Life*, Reclus, like Kropotkin, expresses many of the concepts central to environmentalism today, the most compelling of which is his analysis of human impacts upon the natural landscape and the worldviews that give rise to human action:

The question as to how far the agency of man serves either to adorn or degrade the aspect of nature may seem an idle one to minds of a so-called positive tendency; but it none the less assumes an importance of the highest order. The development of mankind is bound up most intimately with the surrounding conditions of nature. . . . In a spot where the country is disfigured and where all the grace of poetry has disappeared from the landscape, imagination dies out and the mind is impoverished; a spirit of routine and servility takes possession of the soul, and leads it on to torpor and to death. . . .

Following a brief description of past "barbarian" degradation of the land such as excessive cutting down of trees, destroying water balances, and the consequences of such destruction, Reclus continues:

. . . when the nature which they profaned showed hostility against them, they began to hate it, and being unable like the savage to fall back on forest-life, they allowed themselves to fall into deeper and deeper degradation through the despotism of priests and kings. . . .

Even in our own days and among nations the most advanced in civilization, numbers of the works of man have been attended with the fatal result of impoverishing

the soil and disfiguring the face of nature. Taken as a whole, mankind has not yet emerged from his primitive barbarism. (Reclus, 1977, pp. 60-61)

Reclus eloquently demonstrates the irony that so-called civilized human societies are unwilling to respect the sanctity of nature. In his words, "they prefer power to beauty." Reclus identifies the contrast when a human being subscribes to a higher ideal regarding use of the natural landscape, stating that, "he always perfectly succeeds in improving its surface, although he allows the scenery to retain its natural beauty" (1977, p. 63).

Although Reclus began to develop an international reputation with the publication of *La Terre*, it is the nineteen-volume *Nouvelle géographie universelle*, published in weekly installments over a nineteen-year period beginning in May 1875, for which he is best known. This encyclopedia of unprecedented detail presented a country-by-country, region-by-region description of the physical and human geographies of the late 19th century world. "For a generation the NGU was to serve as the ultimate geographical authority, its eminence confirmed by the plagiarists who pillaged it so freely" (Dunbar, 1978, p. 95). The income Reclus gained from the sale of the weekly *livraisons* allowed him the freedom to pursue other goals such as furthering the cause of anarchy. According to Dunbar, Reclus viewed geography and anarchism as "closely related, because the more one understands the world and its inhabitants, the more his prejudices and antagonisms decline, until at last he becomes a true world citizen. . . . [J]ust as [Reclus'] geography was necessary to his anarchism, his anarchism enriched his geography. Reclus cannot be understood if viewed from one side alone" (1978, p. 91). (For a more detailed discussion of Reclus' political views, see Dunbar, 1978.)

Kropotkin and Reclus are just two examples of geographers who extended their observations of reality beyond mere description. Both men used language designed to have an emotional as well as intellectual impact upon their readers. Although the preceding is merely a preliminary foray into their work, it yields an insight into the history of geographical observation and analysis of the natural world and the impact of

human progress upon it. As unpleasant as some of their anarchistic persuasions might be to some, they demonstrated an attitude toward scholarship that might serve as a model for all geographers. Not content simply to observe, Kropotkin and Reclus saw their roles as geographers extending beyond the discipline itself and offering a vision of a better world based on their analysis of the reality of the late 19th and early 20th centuries. Few geographers would follow in their footsteps, but, as will be shown later this chapter and in the next, Kropotkin would become the intellectual inspiration for several contemporary environmental movements. He issued this challenge to future geographers in 1885:

Many specialties will arise, some of them more closely connected with History, and others with physical sciences; but it is the true duty of geography to cover all this field at once and to combine in one vivid picture all separate elements of this knowledge; to represent it as an harmonious whole, all parts of which are consequences of a few general principles and are held together by their mutual relations. (Quoted in Galois, 1977, p. 91)

As will be shown in the following section, some geographers who made names for themselves in the early 20th century picked up on the subtle mysticism implicit in this passage, focusing in their own work on the "harmonious whole" and offering their contemporaries eloquent and poetic articulations of their sensitivity to the natural context of their scientific explorations.

The Mystics

In setting the historical context for his discussion of the works of two early British geographers, David Matless describes geography in the early 20th century as follows:

Geography was constituted as a discipline concerned with nature and environment at a time when discussion of such themes was very much geared around post-Darwinian debates on not only physical but social and spiritual evolution. At the turn of the century evolution was increasingly seen less as a rational process based on the competition for resources than as a force having both direction and purpose in a physical, social and spiritual sense. . . . Geography at the time was not the hermetically sealed field of empirical enquiry which it is sometimes considered to have been. . . . And among the many sides to this geographical outreach, . . . an attention to spiritual and mystical themes regarding nature and environment was . . . highly significant, not merely in forming a sub-field of geographical enquiry, but in informing the purpose and practice of a considerable part of the discipline. (1991, p. 283)

Matless brings to light an inspiring segment of geography's heritage in his analysis of some of the works of Vaughan Cornish and Sir Francis Younghusband. Both were accomplished explorers and extensive travelers, and, in addition to producing copious notes and detailed descriptions of their field trips, they brought a spiritual and poetic dimension to their writing that is rare in academic writing. Cornish and Younghusband were interested in nature-mysticism "centred on a particularly modern vision of spiritual continuity, universality and leadership, and on a conjunction of the spiritual and scientific" (Matless, 1991, p. 273). Once described as "a typical child of the romantic movement" (M. Shoard, quoted by Pepper, 1984, p. 88), Cornish's admiration for Romantics such as William Wordsworth and John Ruskin is evident in the following passage, which closes *The Poetic Impression of Natural Scenery*:

Sailing from Quebec on the homeward voyage we took the northerly course by the Strait of Belle Isle between Newfoundland and Labrador. Here the auroral light appeared above the northern horizon, spreading its display from hour to hour. At midnight, curved, pointed wisps, too luminous for cloud, too cold for flame, reached upwards towards the Pole. A glowing arch from East to West spanned the zenith, and luminous bands spread half-way across the southern sky. The bands did not crowd near to the horizon after the manner of terrestrial clouds, and though they had the appearance of a veil they did not dim the stars. The gaps between the glow were dusky as the clouds of night yet also there the stars shone clear. There was no motion seen in the aurora yet it was ever changing through the night.

Never has the Natural Scene pictured more perfectly the mind of modern man, with knowledge sure and certain extending to the depths of space, interwoven with mystery which reaches to his very doors. (Cornish, 1931, pp. 85-86)

The foundations of Cornish's more poetic works, in contrast to his "scientific" literature, are probably best expressed in his preface to this volume, in which he refers not only to the "warp" and "weft" of the physical landscape, both of which are visibly observable, but also to perceptions and guidance of a more mystical kind: "In the presence of Nature's beauty let busy thought quiet down and let us listen not to the voice of the prophets but to the voice which spoke to the prophets, for here is an original source of inspiration accessible to all peoples, nations and languages, a pure fountain undisturbed by discordant tradition, unclouded by intellectual error" (Cornish, 1931, preface). Cornish was profoundly religious but not dogmatically attached to his Christian

upbringing. He praised Roman Catholicism for its attention to beauty as art in churches, but condemned Puritanism as "denigrating both beauty and the worship of nature" (Matless, 1991, p. 274). He was deeply attracted to Eastern mysticism and traveled extensively in the Orient. The following passage reveals both sources of his spiritual inspiration: "So protective was the cloud which screened a source of light whose brightness would but blind, so beneficent the rays which spread illumination down below, that the myth of the angels' ladder no longer satisfied the mind, and I dwelt in thought upon the nobler image of the outstretched hand of Buddha laid in blessing on the world" (1931, p. 72; quoted in Matless, 1991, p. 275).

In addition to the poetic expressions of much of his literary output, Cornish also recognized the importance of rationality in the human experience and called for an alliance of sense and intellect in order to avoid nonsense and irrationality. In contrast to most other scientists, Cornish viewed the role of the intellect as the essential requirement in interpreting the guidance offered by the "Spirit of the Universe." In other words, reason is to be used in conjunction with faith to determine the essential truths of the human experience, an epistemological approach not unlike that applied in this thesis and by some of Cornish's predecessors described earlier, in which the inherent harmony of science and religion is explicitly stated. Cornish also seemed to embrace a more holistic approach to science than that characterized by the positivistic techniques promoted at the time. In his 1928 Presidential Address to the Geographical Association, he described his methodology for devising the principles of aesthetic geography, reversing the "standard" order of geographical inquiry that begins with rocks and works its way up to humans. For Cornish, the more appropriate order was to start with the largest scale of activity on the planet, human civilization, and work his way down through "animated nature" to the "elemental background" (Cornish, 1928).

His last publication in this genre, *The Beauties of Scenery*, written as he commenced his ninth decade of life, is a masterpiece of descriptive prose, capturing his perception of

the true essence of each subject of his observation. The book is an eclectic collection of Cornish's descriptions of the sublime and the ordinary, the magnificence of mountain ranges and the curve of a letter on the printed page, the earth's celestial canopy and the artistic and historical impressions on a coin. The style and content of the writing demonstrate how Cornish integrated his knowledge of form, colour, perspective, and a solid geographical sense to describe the importance of a wise use of one's gifts of observation, when, for example, looking out a window:

Landscape features surrounded by a window-frame differ in appearance from the same features viewed out of doors. If the observer stands close to the window the difference is slight, but from further back, at a distance of two or three times as great as the diameter of the opening, the view is greatly improved, as the following example illustrates—namely, the view of pines and deciduous trees seen through an open casement of moderate size. The casement being narrow and relatively high, its shape suits the tree-form. The apparent height of the trees seen thus is nearly double that which they present when seen out of doors, an example of the fact that the subconscious mind accepts the field of attention as invariable, that is to say subtending a constant angle. The colours, moreover, are intensified, so that in two important respects the appearance of the trees is greatly enhanced. The intensification of colour is evidently due to the screening of the eye from the side light, our vision being more pictorial when we are provided with blinkers. (Cornish, 1943, p. 113)

In this book, Cornish departs from the tradition established by some of his Romantic predecessors, attempting to ignore the impact of the built landscape on the natural. Cornish found beauty in both, extolling the virtues of certain styles of architecture, and, in this case, employing them to enhance his perception of a natural scene.

Cornish's works described in this section are primarily a result of the influence of Sir Francis Younghusband's 1920 Presidential address to the Royal Geographical Society, "Natural Beauty and Geographical Science," in which geographers were called upon to take "a less material and a more spiritual view of the Earth than we have done." The address began with an earnest appeal that geographers "should take a profounder and broader view of Geography, of its fundamental conception, and of its scope and aim, than we have hitherto taken; and should regard the Earth as *Mother Earth*, and the *beauty* of her features as within the purview of geography" (Younghusband, 1920, p. 1). For

Younghusband, the most important aspect of the "outward expression" of the features of the earth and the most worth

learning about, knowing, and understanding is their beauty; and . . . knowledge of their beauty may be legitimately included within the scope of geographical science.

. . . Geographical science . . . should refuse to be confined within . . . arbitrary limits and should take cognizance of quality as well as quantity. (p. 3)

Younghusband referred to the "universal" capacity within human beings to appreciate beauty, highlighting the contribution that many poets and painters make in "pointing out" to "less keen-sighted individuals" the beauty in the various features of the earth. Any description of a particular region is incomplete if it does not include an expression of its beauty and the impact of that beauty on people (p. 5). The inclusion of beauty within geography's mandate is, to Younghusband, further supported by the knowledge that "natural beauty affects the movements of man, and that man is having an increasing effect upon natural beauty . . ." (p. 6).

Emerging out of this intellectual environment and attraction to the study of the beauty of nature was Carl Sauer, who continued and developed "traditions" in geography that are still followed today by scholars all over the world.

The Sauer School and Man's Role in Changing the Face of the Earth

In his introduction to an anthology of Carl Sauer's essays, John Leighly discusses Sauer's sense of morality as a geographer:

The ethic Sauer has had most frequent occasion to avow . . . is an ethic of responsibility for man's terrestrial inheritance, which has suffered such appalling depletion under the impact of technology. His abhorrence of irresponsible destruction of the bounty and beauty of the earth led him into his principal public services. . . . An international Symposium on Man's Role in Changing the Face of the Earth held at Princeton, New Jersey, in 1955, for whose organization Sauer was largely responsible, provided the occasion for his most mature utterance on this theme. (In Sauer, 1967, p. 4)

Leighly likens Sauer in temperament to other scholars and devotees of nature (such as Henry David Thoreau and John Muir) who also romanticized and glorified non-human landscapes or pre-modern human societies. Leighly summarizes Sauer's message:

"There is such a thing as a humane use of the earth; the simpler cultures are less destructive of the terrestrial basis of man's existence than is our present technology; and the possessors of modern technology may find in the past experiences of man on the earth guidance toward a balance of the capacities of the land with the requirements of life that gives some promise of permanence" (quoted in Sauer, 1967, p. 7).

Thus described, Carl Ortwin Sauer (1889–1975) can be seen as following in an already rich tradition in geography. Yet, he is one of the few of his generation and those immediately preceding him whose works have withstood the tests imposed by the quantitative revolution of the 1960s and the positivism/humanism conflicts of the 1970s. Despite focusing a great deal of his attention on what is now labeled "regional geography" with a somewhat deprecating tone, Sauer's work is often held up as a model for young geographers, especially in North America, to follow.

One of the reasons that Sauer's version of "regional geography" stands above those that followed was his emphasis on capturing the "personality" of the region. His concept of personality "does not deal with land and life as separate things, but with a given land as lived in by a succession of peoples, who have appraised its resources for their times in terms of their capacities and needs, who have spread themselves through it as best suited their ends, and who have filled it with the works that expressed their particular way of life" (1967, p. 104). As a cultural geographer, Sauer was also a historian, viewing the pursuit of cultural history as part of a geographical exercise to trace the development of humanity's impact on the natural environment, which he perceived as part of humanity's legacy, providing lessons for the future. Coinciding with humanity's technological development was increasing evidence of, in Sauer's words, nature's "revenge."

In addition to his prolific output in cultural geography, Sauer had strong and well articulated views regarding geography's mandate. In an essay early in his career, "The Morphology of Landscape" (1925), Sauer contributed to the debate underway in the discipline at the time (and still ongoing) as to what constituted geography's contribution

to science. Sauer felt that geographers should be involved in the promotion of morphological study of the landscape:

The task of geography is conceived as the establishment of a critical system which embraces the phenomenology of landscape in order to grasp in all of its meaning and color the varied terrestrial scene. . . .

The objects which exist together in the landscape exist in interrelation. We assert that they constitute a reality as a whole that is not expressed by a consideration of the constituent parts separately, that area has form, structure, and function, and hence position in a system, and that it is subject to development, change, and completion. Without this view of areal reality and relation, there exist only special disciplines, not geography as generally understood. (Sauer, 1967, pp. 320-21)⁴⁹

Despite this emphasis on the physical landscape, Sauer's view included geographers being inherently incapable of following the positivist tradition:

[I]n the selection of the generic characteristics of landscape the geographer is guided only by his own judgment that they are characteristic. . . . [An objection] is sometimes urged against the scientific competence of geography, because it is unable to establish complete, rigid, logical control and perforce relies upon the option of the student. The geographer is in fact continually exercising freedom of choice as to the materials he includes in his observations, but he is also continually drawing inferences as to their relation. (1967, p. 323)

In this manner, long before the quantitative revolution shook geography in the 1960s, Sauer had already established an argument against the efficacy of such a phenomenon occurring. This quotation also articulates one of the stances taken by proponents of a humanistic approach to geography, which largely arose as a reaction against the quantitative revolution.

Sauer also expanded upon two of the themes that will gain importance in the next chapter, that is, the motivations that drive human use of nature and the inherent value of nature itself:

Geography is distinctly anthropocentric, in the sense of value or use of the earth to man. We are interested in that part of the areal scene that concerns us as human beings because we are part of it, live with it, are limited by it, and modify it. Thus we select those qualities of landscape in particular that are or may be of use to us. We relinquish those features of area that may be significant to the geologist in earth history but are of no concern in the relation of man to his area. The physical qualities of the landscape are those that have habitat value, present or potential.

⁴⁹ Cf. Brown's discussion of "man as a geomorphological process" (1970).

... geography is based on the reality of the union of physical and cultural elements of the landscape. The content of landscape is found therefore in the physical qualities of area that are significant to man and in the forms of his use of the area, in facts of physical background and facts of human culture. (1967, p. 325)

The first paragraph of this extract could be perceived by some contemporary environmentalists as simply further perpetuation of justifications for humanity's exploitation of the earth for its own ends, a position espoused in various extremes by those who call themselves biocentric or earth-based in their approach to life. As will be seen in the next chapter, in its more radical manifestations, such a view often makes value judgements in favour of non-human life with devastating consequences for their human neighbours. Sauer was writing during a period and in a discipline shaped in large part by notions of environmental determinism. Sauer's response was to point out that such a causal relationship, that is, the environment essentially dictating human behaviour, was not so easily characterized, that the interactions between humans and their environment are inherently complex and involve selections of those qualities of the landscape deemed necessary for human survival.

In a later essay, "The Education of a Geographer," Sauer waxed more philosophical than usual.⁵⁰ In a simply worded yet profound rejection of the tendency in academia to specialize and to indulge in perpetual "navel-gazing," both of which activities still cause identity crises among geographers, he said:

If we shrink the limits of geography, the greater field will still exist; it will be only our awareness that is diminished. (1967, p. 394)

The compelling wisdom of this statement is augmented when one considers the consequences of substituting the word "geography" for any of the academic disciplines or indeed any aspect of society. As stated at the outset of this thesis, only through more integrated and interdisciplinary approaches to scholarship are we likely to discover and to embrace the knowledge necessary to solve the crises facing humanity at the present time.

50. One scholar describes Sauer as a philosopher "in spite of himself." See Entrikin (1964) for an examination of the naturalistic philosophy inherent in Sauer's work.

Sauer concluded his essay with the following thoughts, which integrate philosophy and science, morality and empiricism:

Esthetic appreciation leads to philosophic speculation, and why not? Are not the compositions of nature, the lines and colors of terrain and of mantling vegetation proper things to consider? How almost inevitably right are the rural scenes wherever simple folk have designed and placed their habitations! The structures of man express function in adaptation to site, with the identifying stamp and preference of each particular culture. There is an esthetics of the assemblage of forms, an esthetic morphology of landscape, latterly often violated by industrial civilization. Is not this question of the harmonious landscape also something proper to think upon?

We need not say that it is not for us to cross the threshold of value judgments. We are largely committed to the study of human behavior; it is proper and reasonable that we are troubled about how man has acted for good or evil. Social science as practised today has not replaced moral philosophy. As we study how men have used the resources available to them we do distinguish between good and bad husbandry, between economical or conservative and wasteful or destructive use. We are distressed by the progressive impoverishment of parts of the world. We do not like soil erosion, forest devastation, stream pollution. . . . We are aware that what we do will determine for good or evil the lives of those who will come after us. And therefore we geographers, least of all, can fail to think on the place of man in nature, of the whole of ecology. Man's intervention in and disturbance of the organic and inorganic world has become so accelerated that we may be tempted to escape from the present into a future in which technology has mastery over all matter, and thus promises forgiveness and redemption. But will it? Is that our fated way? Is that the sort of world we want? (1967, pp. 403-4)

As indicated in the quotation that opened this discussion of Carl Sauer, his sense of morality motivated him to participate in events that had the potential to shape the future of human destiny or at least to improve social conditions during his lifetime. One of the most significant of those events was the symposium, "Man's Role in Changing the Face of the Earth," which represents one of the landmarks in 20th-century geography, with fifteen geographers, including the organizer and one of the chairs, among the 53 participants. Despite the large role played by geographers in this event, the central theme of the symposium would be rejected by the discipline in subsequent years as many geographers became more enthralled with positivism in the 1960s (Williams, 1987, p. 219). Although celebrated at the time in many areas of academia, recent review of and commentary on the contributions to the symposium have been mixed.⁵¹ As will be

51. Lowenthal (1990) and Williams (1987) offer contrasting impressions of the impact of the symposium at the time and over thirty years later. Williams' praise of the event is set in the context of his article on Sauer's contribution as an organizer and co-chair. Lowenthal's comments were made at a similar symposium held at Clark University in 1987, which will be discussed below.

shown, the symposium might be described as a missed opportunity to present a truly visionary program for change through the consultation and insights of dozens of scholars from numerous fields of expertise. It was, however, unprecedented in its interdisciplinary approach to studying the impacts of human use of the earth's resources and in heightening environmental consciousness in the West.

The symposium was dedicated to George Perkins Marsh, whose pioneering contribution to studies of human impacts on the natural environment received sound praise in the opening comments by William Thomas, Jr. (1956, pp. xxvii-xxx) and those of other participants. In contrast to the themes set by co-chairs Carl Sauer, Lewis Mumford, and Marston Bates, "Retrospect, Process, and Prospect," the tone of many of the contributions to the symposium was descriptive and often ethnocentric. Despite its tribute to Marsh and the standard set by *Man and Nature*, the impression one gets in reading the volume of proceedings almost forty years later is of scientific detachment. In the words of one reviewer, "in both tone and content, . . . the symposium on balance displayed a remarkably low level of concern about human impacts" (Lowenthal, 1990, p. 124). Lowenthal describes many of the participants as manifesting the same "benign" and "optimistic" attitude toward human exploitation and destruction of the natural environment and human belief in its ability to "rectify abuses" that was documented by symposium contributors Clarence Glacken and William Thomas in their summaries of the history of environmental thought. Participants who did express alarm at the destruction were accused of using "outdated" and "obsolete" concepts and theories (pp. 124-25).

Contributions that offered an insight into the ethical aspects and philosophical implications of human advances in technology, such as E. A. Gutkind's opening article on the impact of the airplane on the human quest for knowledge, were also in the minority.⁵² Although in some portions of the article, his views are techno- and, in some

52. Gutkind is not the only scholar to use the airplane as a symbol for the impact of human progress on nature. See Theodore Roszak's chapter "Uncaging Skylarks: The Meaning of Transcendent Symbols" in *Where the Wasteland Ends* (1973, pp. 318-88).

places, ethnocentric (as will be shown below), the explicitly moral tone of Gutkind's contribution is in marked contrast to the more descriptive offerings from other participants. Purely descriptive commentary leaves no room for discussion or consultation. Gutkind's presentation opens the door for further investigation of his ideas and conclusions, inviting more research and debate.

In the opening pages of his article, he sums up the impact of the airplane on the expanding horizons of human awareness:

Consequently, the comparative study of man's transformations which the airplane makes possible opens the way toward a re-evaluation of what man has done and what he can do to the earth. Above all, the widening scale of the reassessment of the work of previous generations and of the great possibilities which the future holds in store leads us to an increased awareness of the all-embracing unity of mankind. . . . It makes us aware of the inescapable fact that only *differences in degree, not of principle, distinguish nations*. (1956, p. 3)

Gutkind appears to be sensitive to the spiritual transformations that have taken place over human history and devotes most of the article to an analysis of what he describes as three "chains of transformation" that have occurred throughout time and across the planet (1956, pp. 11-44). His use of aerial photographs to portray graphically the evidence for his argument is effective. However, his discussion of the closing phase of his "successive stages," which he labels "responsibility and unification," reveals his attachment to and glorification of technology even when it is used to excess. He glorifies the Boulder Dam in Arizona in the caption below the photograph:

It is a long way from the earliest regulations of rivers, when a dam served as a protecting screen for the surrounding country, or from the primitive water control of African tribes, to the gigantic modern structures. To mere protection is added generation of power; to the needs of agriculture, those of industry; and to the mimicry with which early works copied natural features, the self-conscious originality of today, beautiful in its simplicity and decisive in its grandeur. . . . The electric-power plant supplies hydroelectric power and irrigation water to a large area with a highly developed economy. It is the main source of energy which has enabled Los Angeles and the surrounding region to increase its population to a very considerable degree and at an unprecedented pace. (p. 29)

The reader of this caption in the context of the overall discussion and in light of the following passage, which closes the article, is struck by apparent internal inconsistencies

in Gutkind's argument. Perhaps this contradiction is a reflection of the forum in which the paper was presented. The overarching atmosphere in the 1950s in the United States was glorification of the feats of which human beings were capable and of the progress of society. As already mentioned, the impression is of a lack of *passionate* concern for the earth and an absence of a sense of urgency over the problems human beings have created. But Gutkind's closing comments set the tone for a very different kind of atmosphere, one in which ideals could have been presented side by side with practical solutions:

Ideas are more potent forces than material achievements. They are the real driving power behind our actions. This is the reason why this paper has been written with a strong emphasis on the imponderables which are at work behind the discovery of the third dimension, the conquest of the air, and the reshaping of our environment. It may be expected that this approach is not to the liking of the eternal realists. . . . For them, only that counts which can be seen and touched and used directly and practically. . . .

Today the whole world is our unit of thinking and acting. Nothing can develop in isolation, and the transformation in one country produces direct reactions on the physical and social structure of all the others. (p. 44)

It appears then that there were two sentiments being expressed at the symposium—sensitive concern based on perceptions of humanity's devastating impact on the natural world and a detached assessment of the nature of the world—neither of which really tapped into or responded to public concerns at the time. Hiroshima had awakened public sensitivity to the devastation that could result from misguided human ingenuity and extreme applications of technology. There was, however, an apparent schizophrenia in public attitudes at the time: on the one hand, technological successes such as the burgeoning space industry and medical breakthroughs were welcomed; on the other hand, many people were very wary of the extremes to which such technology might be applied. There was a growing sense that human beings were too smart for their own good. A glaring omission at the symposium was its lack of attention to nuclear issues, which were becoming a cause for concern among the scientific community and the public. One participant commented later that "the general silence on this subject is strange, and our own silence is even stranger. . . . That we have not said a word about the fact that the leaders of the Pentagon . . . may destroy the major habitats on the planet . . . is

frightening" (Lewis Mumford, quoted in Lowenthal, 1990, p. 125). Lowenthal describes the absence of issues of general public concern from the symposium as "an extraordinary disparity. . . . *Man's Role* envisaged no role for a concerned public, whose apprehensions the symposium nowhere touched upon." Quoting the introduction to the volume, Lowenthal remarks that the intended audience was "scholars in oncoming generations" rather than the general public at the time (1990, p. 126). Given the growing threat of global annihilation should the nuclear race escalate out of control, as many at the time suspected it might, the apparently misguided optimism and faith in human indestructibility that was manifested by many of the esteemed scientists who participated in this symposium is remarkable.

To place the symposium in its true perspective though, one must remember that its organizers never intended it to transform the world or even American society. In the words of its convenor, the symposium's purpose was "neither to propose an action program nor to pass resolutions" (Thomas, 1956, p. *xxi*). It was a collection of invited individuals from the United States and overseas, brought together to share their perceptions of the different aspects of the symposium's theme. In that limited ambition it was successful. Certainly, given the summations made by the symposium's co-chairs, it was a stimulating and enriching experience for the participants. But in terms of its contribution to the rest of society, its impact is limited, both in its stated objective of reaching "scholars in oncoming generations" (less than two generations later the descriptive material and analysis are dated) and in what academic exercises should always have as their underlying goal, offering food for thought for individual members of society to ponder and to analyze for themselves in their personal endeavours to contribute constructively to human development and in their independent quests for the truth.

Despite the limitations in its impact and influence, "*Man's Role in Changing the Face of the Earth*" did offer a thematic model upon which future symposia could be based. And the volume of proceedings was an early, valuable contribution to what would

become an enormous body of literature. One scholar has attributed the impact of the volume to the qualities of one man, Carl Sauer, who

often admitted that he was out of step with his contemporaries and his times. But in being so he was probably ahead of both. His concern to think about change, his knowledge of active workers in a wide range of disciplines, his abiding faith in the pragmatic values of historical analysis, and his concomitant conviction of the permanence of facts and the transience of theory made "Man's Role" a more important book than it might otherwise have been and one that was ahead of its time. (Williams, 1987, p. 231)

Indeed, when looking back on works from previous generations, one must not be too harsh a critic by judging such works using current standards. For its time, "Man's Role" represented a unique effort at integrating a diversity of academic viewpoints into one unified assessment of the past and the present. It may be seen as an excellent example of geography's ability to examine in a comprehensive manner the intricacies of the human--earth relationship, forging stronger links between physical and human geography (Stoddart, 1987). As will be seen below, only in recent years have scholars begun to recognize in greater numbers the importance of vision and ethics in scientific inquiry. There have, however, been exceptions, among whom is one of Sauer's contemporaries. This historical survey continues with the work of one of the progenitors of concepts such as "the geographical imagination" and "geopiety," themes that would provide the foundation for more humanistic approaches to geographical inquiry.

Humanistic Geography: An Unconstructive Detour or the Soul of the Discipline?

Lamenting the determination of many geographers to present their subject with strict impersonal objectivity, John Kirtland Wright has said: "Unfortunately, this deep seated distrust of our artistic and poetic impulses too often causes us to repress them and cover them over with incrustations of prosaic matter, and thus to become crusty in our attitude toward anything in the realm of geography that savors of the aesthetic" (1947, p. 7). Efforts by geographers over the century to foster a balanced presentation of the subjective

and objective realms of scientific endeavour have culminated in what is called "humanistic geography." For the next few pages, some of the major themes and contributions to this stream are highlighted, beginning with the scholar whom most contemporary geographers recognize as the first geographer to explicitly and repeatedly emphasize the importance of the person, the human element in scholarship.

Terrae Incognitae: The Legacy of John Kirtland Wright

Wright's emphasis on the individual sets him apart from his contemporary, Carl Sauer, who adopted a broader view of culture and landscape. Another major distinction between the two is that Wright was ignored rather than celebrated by his contemporaries, although his Presidential address to the 1946 annual meeting of the Association of American Geographers was to become a landmark in geographical literature. His presentation was published the following year in the *Annals of the AAG* as "*Terrae Incognitae: The Place of the Imagination in Geography*." Wright concluded his address with this statement: "The most fascinating *terrae incognitae* of all are those that lie within the minds and hearts of men" (1947, p. 15). Thus, Wright reinforced the importance of the subjective aspects of human experience and set himself apart from the notions of environmental determinism that had been so instrumental in shaping American geography early this century.⁵³ To Wright, the mystique of *terrae incognitae* was insatiably alluring. The feelings of thrill, mystery, and even fear of the unknown are among the most exciting aspects of being human. The imagination is the vehicle by which we explore *terrae incognitae* in whatever form they are presented to us. Wright viewed geography as the ideal forum in which to pursue and express the products of one's explorations into *terrae incognitae*:

What distinguishes the true geographer from the true chemist or the true dentist would seem to be the possession of an imagination peculiarly responsive to the stimulus of *terrae incognitae* both in the literal sense and more especially in the figurative sense of all that lies hidden beyond the frontiers of geographical knowledge. . . . The imagination not only projects itself into *terrae incognitae* and suggests routes for us to

53. For his reaction to the work of American geographer Ellen Churchill Semple, see Wright, 1966.

follow, but also plays upon those things that we discover and out of them makes imaginative conceptions which we seek to share with others. (1947, p. 4)

Wright's introduction of the term "geosophy" ("the study of geographical knowledge from any or all points of view"), as distinguished from geography, marked one of the most important landmarks in the history of humanistic geography. Although the term is rarely used, there has been a growing acceptance of the importance of the imagination and subjectivity in geographical research (Handley, 1993).⁵⁴ The rise of spatial science in the 1950s delayed widespread appreciation for Wright's contributions and retarded the growth of humanistic geography. It was not until 1961 and David Lowenthal's "Geography, Experience, and Imagination: Towards a Geographical Epistemology" that humanism appeared explicitly again in geographical literature. Lowenthal opened his article with Wright's parting shot to the AAG fifteen years earlier and went on to place geography at the forefront of endeavours to describe, analyze, and explain human existence (see epigraph opening this chapter).

Lowenthal was not the only geographer at the time concerned with the dehumanizing nature of geographical studies. *Landscape* magazine had been established a decade earlier by J. B. Jackson as a forum initially for portraying the American southwest and, after one year, expanding to include articles about landscapes of all kinds and places.

In the 1970s, there appeared numerous critiques of the strict positivistic stance that had dominated geography in the 1950s and 1960s. This period also marked the beginning of a formalized division in the positions taken by those promoting a more humanistic approach to geography. One theme—studies of human beings and their interaction with their environments—had been going on since the middle of the century by people like Carl Sauer and J. K. Wright. This legacy was carried on by Lowenthal,

54. Wright's own imaginative literary gifts and sense of humour are reflected in other coined terms, among which "categorilla," "a categorical, superlative, unproven, and perhaps improbable assertion" that combines category and the most superlative of the apes, gorilla (1966, pp. 159-60) is probably the most interesting. Only two of Wright's coined terms (geosophy and geopoetry) have been repeated with any regularity in other scholars' works.

Hugh Prince, J. B. Jackson, and others. The second theme — humanism presented as an alternative to and critique of the spatial analytical stream in geography — began to develop in the early 1970s with contributions by a variety of scholars offering different permutations of idealistic and realistic visions. The internal debate within humanistic geography revealed one of the areas for which it would be criticized by proponents of “less philosophical” approaches to geographical enquiry, that is, the internal fragmentation in the approach due to the varied philosophical backgrounds upon which it is based. In an article in the late 1970s, Anne Buttimer identified one of the challenges to be faced by humanistic geographers as they attempted to apply their philosophical perspective in relevant and valuable research.

Perhaps the most ambitious challenge that “humanistic” geography could set itself is to provoke an awareness of how culturally relevant our notions of humanness, life, and world are and have been, and to point to some implications for knowledge and for experience. . . . The ultimate challenge, precious but costly, is to develop a truly personal type of knowledge, one that allows for emotion as well as thinking, passion as well as reason, and one that leads to an understanding of the self as well as to an understanding of the world. (1980, pp. 73–74)

Both Buttimer and Yi-Fu Tuan were among the most prolific in their respective contributions to furthering the understanding of both realms of human experience.

For Love of Topophilia

Beginning in 1971 with “Man and Nature,” his resource paper for the Association of American Geographers, Yi-Fu Tuan has created a body of literature exploring the hidden meanings, patterns, and forces that shape human existence. As demonstrated in his books and articles, in all his writings on landscape, culture, aesthetics, and so on, Tuan has personified the ideal humanistic geographer, whose main function is “to clarify the meaning of concepts, symbols, and aspirations as they pertain to space and place . . . to make the virtues and defects of a culture explicit” (Tuan, 1976, p. 275). One of the recurrent themes in his work is the distinction between scientists who attempt to remain as

detached as possible from their work and geographers. Tuan urges geographers to stay as close to reality as possible, using the landscape (in whatever form it appears) as a "point of departure" in our quest for understanding human aspirations and ideals. "Landscape allows and even encourages us to dream. . . . As we first let our thoughts wander and then refocus on the landscape," he writes, "we learn to see not only how complex and various are the ways of human living but also how difficult it is to achieve anywhere a habitat consonant with the full potential of our being" (1979, p. 101).

Tuan combines his reflections on human impacts on and reactions to the environment and his critique of the discipline of geographical study in "Space and Place: Humanistic Perspective," in which he identifies the valuable contributions of both positivism and humanism to studies of humanity and the environment: "To the humanist, positivist concepts are themselves material for further thought because they represent for him an extreme example of the universal human tendency toward abstraction. . . . As distinct from the concepts, the conclusions of the positivist geographer are of primary interest to the humanist because, like the findings of other scientists, they show him the limits to human freedom that he cannot otherwise know" (1974a, p. 246).

Topophilia: A Study of Environmental Perception, Attitudes, and Values (1974) remains his most important and most well-known work despite considerable output since then. In the introduction, Tuan identifies a void in the direction taken by the environmental-ecological movement of the 1970s: the formation of attitudes and values in human beings. Tuan proceeds to explore the connections between human perception and culture, culture and environment, and the history and diversity of expressions of these relationships. His goal is to offer an integrated view of a number of previously fragmented and heterogeneous themes in one volume, offering a common ground upon which these themes can be studied further. His survey covers a general overview of how human beings perceive and structure their environment; the distinctions between and among so-called "primitive" and "civilized" cultures in terms of their interpersonal

relations and their attitudes toward nature and the cosmos; and the meaning and history of concepts such as city, countryside, and wilderness. All these themes occupy a central place, at least implicitly, in this thesis and in the works of other geographers and social scientists studying and writing about the human–nature interface from a perspective that recognizes and appreciates the more subjective approaches to scientific enquiry.

Contemporary Contributions from “Across the Pond”

The Origins of “Technocentrism” vs “Ecocentrism”

The most well-known contemporary contributor to geographical research on environmentalism is Timothy O’Riordan of the School of Environmental Sciences at the University of East Anglia. O’Riordan has been writing about environmentalism for over twenty years, offering one of the first overviews of the movement with his book *Environmentalism* in the mid-1970s. Although much of his work has been primarily descriptive, presenting comprehensive examinations of the approaches taken by environmentalists, articles published in recent years reflect more penetrating analysis of the environmental movement, the global society in which it exists, the institutions against which it reacts, and the philosophical underpinnings of the positions expressed.

A recurring theme in O’Riordan’s work is two environmental approaches, which he distinguishes as ecocentrism and technocentrism. Within each approach, there are two divisions: ecocentrism is comprised of “Gaianism” and communalism; technocentrism is manifested by accommodation or optimism (1985, p. 1432). Technocentrism is based on an anthropocentric view of the earth reflected in management policies regarding resource development and environmental protection. Optimism is embodied by management approaches based on “well-established economic forces” that will ensure both growth and survival, at least for “a substantial majority.” Accommodation represents the responses made by the governing institutions to the environmentalist challenge. The results are primarily superficial modifications that do nothing to change the power structure.

Technocentrism is found most commonly in individuals and organizations based on and benefiting from conservative politics and neo-classical economics, basically the economic and political elite in every country (O'Riordan, 1985, pp. 1432-33).

Ecocentrism reflects a reaction to the prevailing technocratic system. It is found in those organizations calling for a redistribution of wealth and power to a more decentralized, community-based society. It reflects an awareness of the organic and vital interconnectedness of humans with the natural environment. The two subdivisions within ecocentrism represent a similar polarity to that expressed by the optimists and accommodationists that manifest the technocentric approach. Optimists operate from a position of moral righteousness, as do Gaianists. However, in contrast to their technocentric counterparts, Gaianists believe that humanity is not the dominant species on the planet. They perceive the earth as a living, self-regulating system and that the moral basis for economic advancement lies in the organic connections that characterize the natural and social domains. Communalists espouse the "grassroots" approach that bases its activities on the cooperative abilities of people to organize their own communities given the freedom and incentive to do so (O'Riordan, 1985, p. 1433).

O'Riordan describes a "new environmentalism" as being characterized by a growing divide between the ecocentric and technocentric positions. He places different environmental organizations on a continuum that ranges from gaianism through communalism and accommodation to optimism. The most influential groups such as public interest environmental organizations that advocate consumer, civil liberty, and other reformist interests occupy the center of this continuum. O'Riordan sees "new environmentalism" playing an integral role in social reform, spurring "the coordination of policies around . . . principles of 'sustainable' resource utilisation, around the inter connections of social, regional, and environmental investments, around the opportunities provided by the emerging electronic and information-transfer technologies to liberate vast numbers of people from the drudgery of conventional employment" (1985, p. 1434). It

is unclear exactly what O'Riordan means by "the drudgery of conventional employment." He continues with a discussion of the issues surrounding Third World development and the linkages between poverty and environmental degradation. Except for the examination of various philosophical stances of environmental groups, this work does little to address the moral issues underlying the environmental movement. Also, as will be seen in Chapter 4, O'Riordan's breakdown of environmentalism into four positions on one continuum offers only a superficial insight into the complexity of the field.

Recently, however, O'Riordan has demonstrated a sensitivity to the philosophical underpinnings of environmentalism. In this work, he analyzes, in a manner reminiscent of Tuan's early work, the differences in perceptions of the environment:

The environmental idea lies in the synthesis of . . . two ways of interpreting the natural world. On the one hand, "environment" is perceived as a set of processes capable of being examined and understood by objective empiricist science. . . . On the other hand, "nature" is perceived as being mysterious, sanctified and very precious. In this context, to molest the natural world is an act of moral criminality. So the addition of an "unnatural" substance becomes a matter for ethical, or political, not merely "scientific" debate. . . . "Vernacular science" . . . is really the emerging integration of these two ways of knowing and understanding. (O'Riordan, 1991, p. 150)

In this passage, O'Riordan identifies a crucial perceptual distinction, that is, the difference between the concepts of environment and nature, which vary from culture to culture and person to person. It is unclear exactly what he means by the addition of an "unnatural" substance. Does he mean that human beings and their activities are unnatural? Or just our systems and processes as they have developed in Western society? The next chapter includes an overview of social ecology, a movement that explicitly addresses these questions. In this article, O'Riordan attempts to outline an interdisciplinary, in his words, "vernacular" science, in which problem solving addresses

both the context in which a problem is defined, as well as the manner in which acceptable solutions are found. The aim is to move the process of discourse from the "wild" periphery, where antagonism and suspicion are rife, and where claim and counterclaim often result in unproductive dispute. The purpose is to focus on the "tamer" centre, where there is hope of clarifying the underlying value positions and redefining factual uncertainties. (1991, p. 154)

O'Riordan does not view vernacular science as a replacement for conventional disciplines but rather as a process for critique by institutions employing frameworks and methodologies appropriate for the task.

O'Riordan also expands his typology of environmental groups, discussing the "dry," "shallow," and "deep greens" and describing the types of groups that occupy these positions. This discussion appears to be O'Riordan's attempt to organize the complexity of the environmental movement along the lines taken in this thesis. However, as will become apparent in the next chapter, the framework in this work takes the analysis several steps further. O'Riordan does offer an enticing introductory description of computer modeling that could offer projections of the future consequences of current environmental policies. Such modeling would be a significant contribution to the debate.

Eco-Socialism

In his survey of the roots of environmentalism (1984), David Pepper sets himself apart from "idealists" such as Fritjof Capra and E. F. Schumacher who "conclude that the remedy for our environmental predicament lies in a change of values—in what *ideals* we hold as true and valid and worth defending. Yet this remedy seems a little lame, for it is offered without accompanying practical guidance on *how* such a change is to be achieved" (1984, p. 5). Pepper contrasts idealists with materialists, who assert that our attitudes are based on institutional and societal systems and processes we have created, especially our economic system. Pepper's promotion of the materialist perspective as "an important development upon the idealistic views" (p. 6) does not indicate that he views as possible a balance between the two approaches. By asserting that modern attitudes derive from "the institutional and societal systems and processes we have created," he ignores the fact that these systems were once only an idea in someone's mind.

Pepper organizes his survey around three themes or classifications of thought: (1) O'Riordan's ecocentrism vs technocentrism, (2) functionalist/pluralist vs Marxist,

(3) determinism vs free will (1984, pp. 26–36), and spends most of the book highlighting the affinities between modern ecological environmentalism and 19th-century romanticism (“non-scientific” root) and Darwinian and Malthusian thought (“scientific” roots), drawing parallels between pagan, classical, Renaissance, and romantic animism and modern ecologists who point to Native cultures as models for behaviour in their respect for the spirit of every living thing (pp. 71–73).

In the 20th century, the legacy of romanticism is complex, expressing itself in hundreds of nature preservation organizations, and legislation that protects certain areas of wilderness from human development and allows citizens to sue on behalf of nature in those areas that cause conflict (p. 88). In response to some of the more extreme forms of romanticism, Pepper cites an article in the *Rocky Mountain Social Science Journal*. “The Environmental Crisis and Present-day Romanticism: The Persistence of an Idea,” which calls for a balance between romanticism and rationalism, finding foundation in the “disciplined part of Thoreau’s work, rather than in his wildness.” “Without a foundation of systematic scientific knowledge, ecological speculation becomes little more than a simplistic attack upon capitalism, the Protestant Ethic, and the entire Judaeo-Christian tradition” (Erisman quoted in Pepper, 1984, p. 90). Religion and science must be balanced in human examinations of the world if they are to be accurate and constructive.

Pepper’s survey of the roots of environmentalism leads him to a pragmatic, secular conclusion that arises out of his discussion of the importance of unity among environmentalists in the education process:

What, then, is the real way forward, if it is not to be solely or even largely through education? It must be through seeking *reform at the material base of society, concurrent with educational change*, otherwise any effects of the latter will be ephemeral. Such reforms must, to be ecologically *and* socially acceptable, be along socialist lines. . . . And we must think in terms of ecological as well as social acceptability, for we must heed the warnings of environmental scientists. Our rightful scepticism about the “objectivity” of scientists must not blind us to the high quality of much of their work and the reality of the environmental threats which it discerns, even though such threats must be seen as historically produced. . . .

But we should not naively imagine that a sudden heightening of collective social and ecological consciousness . . . would provide a revolutionary proletarian breakthrough to

ecotopia. The more likely outcome . . . would be to feed a repressive ethic of the lifeboat, or a yet more secretive and policed society where control of resources and technology was restricted to an ever-tinier privileged elite. . . .

Instead, it is more reasonable to envisage the evolution of an improved socio-economic system from the seeds of the alternative economy which has already been growing steadily out of the West's economic depression in the past decade. (p. 224)

This passage raises several points that highlight Pepper's most significant contribution, that is, his alignment with his geographical ancestors Peter Kropotkin and Élisée Reclus and his social ecologist contemporary Murray Bookchin, whose input into the debate will be discussed in the next chapter. Pepper has developed his theory in a 1993 book *Eco-Socialism*.⁵⁵ However, his ideas on this subject have been simmering for at least a decade as the above quotation and a substantial section of *Roots* indicate. Pepper comments on the "considerable degree of coincidence between ecological visions of the future and the visions and practices of anarchists and socialists" questioning whether the commonalities are "mere" coincidences or inevitable outcomes of ecocentric (using O'Riordan's definition) theories that may have socialist ideology inherent within them (1984, p. 196). He then examines those elements within ecocentric theory that are shared by socialist critique: redefining resources and needs, redistributing resources, analysis of the mode of production, concepts such as alienation and good work, decentralization, and internationalism (pp. 198–201). Although the tone of his remarks in this book is fairly neutral, his anti-establishment stance at the end of the book and the recent publication of *Eco-Socialism* are clear indications of his personal philosophy. Pepper sees the key to the future in the underground economy, in communal societies that try for the most part to be self-sufficient, and in other forms of opting out of and protesting against the prevailing political and economic systems. Basically, he advocates social activism, an ethic widely espoused by environmentalists on all sides of the "centric" continuum, as will be seen in the next chapter.

55. I was unable to obtain a copy of the book in time to do justice to an analysis of its thesis. Therefore, I have confined my discussion of Pepper's remarks regarding eco-socialism to those comments he has made in earlier publications.

A Counterpoint

One new addition to the growing library of works by geographers on the contemporary environmental crisis is no stranger to geography classrooms. Ron Johnston has been prolific in a number of areas of research and his book *Environmental Problems: Nature, Economy and State* is his contribution to the current discussion. Unlike many voices in recent years (e.g., Kates, 1987; Stoddart, 1987; Pierce, 1992; Unwin, 1992), Johnston is explicit in his view that human and physical geography cannot be integrated since they use completely "different conceptions of the nature of science whose epistemologies [are] mutually incompatible" (Johnston, 1989, p. viii). Thus, his book is written from his perspective as a human geographer although he offers a chapter on the physical resource base upon which the environmental crisis rests. Johnston attempts to address two questions: (1) why do we create so many environmental problems? and (2) why, despite all our scientific knowledge and a great deal of pressure, are we not very good at solving them? (p. ix). His attempt to answer these questions is based on an analysis of the role of political economy, the state, and collective action, an analysis that is largely historical and descriptive, offering little insight into the roots of human behaviour. The discussion is based exclusively on contemporary secular interpretations of human history and behaviour, focusing primarily on the societal scale and stating explicitly that "environmental problems must be countered collectively. . . . [A]lthough individual initiative in the attack on environmental problems is desirable there are major limits to it, especially within competitive modes of production . . ." (p. 110).

However, in any analysis of human action, even those explicitly focused on collective or state activity, it is impossible to ignore the role of the individual, a fact that Johnston demonstrates in his discussion of "the prisoner's dilemma" (1989, p. 113–16) and which he uses to explain why, given a choice between polluting and not polluting, two competing industries will both choose to pollute even if they consult on the issue. Johnston develops Garret Hardin's "tragedy of the commons" argument, which states

that "in a finite world individual rational action fails to recognise that finiteness, with tragic consequences for all. . . . Hardin used the 'tragedy' to develop a wider argument regarding the carrying capacity of the earth itself, that the breeding habits of the human population are exceeding the earth's carrying capacity to sustain the additional numbers, and that if this growth is not controlled the ultimate tragedy will be upon us -- genocide" (Johnston, 1989, p. 118). It is beyond the scope of this chapter to explore the numerous contributions to the debate that were spawned by Hardin's controversial thesis; however, Johnston concludes his discussion by employing the materialist mode of thinking that has dominated for most of the last three centuries and has inhibited contemporary scholars by "forcing" them to rely on "modern" institutions or mechanisms to solve human problems. Johnston falls back on the role of the state as the agent of coercive force, although in Johnston's scenario there seems ideally to be more latitude for interpretation at the managerial level than in more authoritarian views (1989, pp. 142-43).

In his concluding chapter, "Alternative Futures," Johnston advances four possible futures earlier outlined by O'Riordan (1981): a new global order, centralized authoritarianism, an authoritarian global commune, and anarchy, all of which, for various reasons, Johnston dismisses as remote possibilities (1989, pp. 188-89). Instead, he discusses two more likely scenarios: a Red-Green alliance between socialists and "green" political activists to effect radical social change through use of the democratic process (where it exists); and working within capitalism to change consumption and production habits (e.g., "green" consumerism, which will be discussed in more detail in Chapter 4 of this thesis) (1989, pp. 190-96). Johnston concludes the book with the following overview of "sustainable development":

. . . the creation of environmental problems is a product of the dominant mode of production in the world today, and the solution of those problems is difficult because the only institutions within which the necessary collective action could be mobilised exist to promote the interests of that mode of production. . . .

. . . the dominant ideology of world society is cornucopian, with a strong belief in human ability to dominate nature, through science, technology and their application via the market-place, and with the necessary support of the state. Whether that vision is

correct is probably best not put to the test, since if it fails it may be too late to design an alternative. But it is very difficult to promote a sustainable alternative within that dominant ideology. (Johnston, 1989, p. 199)

Regardless of how realistic an assessment of the current status quo these words *might* be, they nonetheless represent a type of academic work that offers little hope or incentive for lay readers and academic colleagues.⁵⁶ Johnston's assertion that it "is probably best not" to put to the test the dominance of Western ideology is exactly the type of statement to which this thesis and the work of many others represent a counterpoint. Even if it is "too late to design an alternative" and if it "is very difficult" to work against the prevailing paradigm, surely human history offers sufficient evidence to illustrate that human beings rarely back down from a challenge regardless of the perceived insurmountable odds. Fortunately, the present work is not alone in its view that the application of an ethical dimension to discussions of environmental issues by geographers (and indeed, all scholars) offers a positive and constructive alternative to pessimistic expressions of despair.⁵⁷ Interestingly, geographers working in sustainable development, resource analysis, environmental impact assessment, and studies of the biosphere appear to be impervious to pronouncements of despair, contributing their expertise not only with informed understandings of the relationships between human beings and the environments in which they live but also of the need to adopt more holistic forms of inquiry into these issues. The integral connections between environmental sustainability and global development present numerous opportunities for a broad array of scholars to

56. In his review of Johnston's book, Pepper concurs with Johnston's pessimism in the face of the difficulties posed by the current problems and the solutions that are required to alleviate them. Referring to this concluding chapter as "short and unsatisfying," Pepper suggests that Johnston should examine in more detail the diversity of "Fourth World" alternatives such as "municipal socialism, anarchistic community-based movements, communes and the rest" (1991, pp. 119 and 120). The next chapter of this thesis offers an insight into just how vast an array of alternatives "the rest" actually means.

57. Many leading scholars have expressed concern over the extent to which one's vision of the future can become a self-fulfilling prophecy, and thus encourage us to replace pessimistic and debilitating thoughts with ideas and visions that foster the creativity and ingenuity of human beings. See, for example, Roszak, 1973; Bateson, 1979 and 1991; Dubos, 1980; Skolimowski, 1981; Capra, 1982; Berry, 1988; Clark, 1989; Daly and Cobb, 1989; Laszlo, 1989; and Gore, 1993.

explore potential means to reconcile the conflicts between the so-called developed and developing countries and between environmentalists and economists.

The 1990s: The Last Chance Wasted or Repairing Our Ways Just in Time?

Geographers have participated in integrative and interdisciplinary debates on the issues expressed in the last paragraph for decades. One scholar refers to the geographer's role in such endeavours, especially "in both an analytical and prescriptive capacity, to address such issues as methods to evaluate sustainability, sustainable land use, natural hazards, global warming and its implications for agriculture and forestry, food security, water adequacy, institutional responses to integrating environment and economy, and sustainable development of rural systems" (Pierce, 1992, p. 312). It is in their analytical role that it is important for geographers to become more sensitive to the ethical factors involved in other aspects of their explorations. "The crux for the discipline, however, rests on its ability to abandon many of the traditional divisions, particularly between human and physical, and to forge new alliances which promise to offer a more comprehensive and integrated approach to the problems of global change" (Pierce, 1992, p. 317). The following section outlines how geographers played key roles in a forum that represented another chapter in geography's long history of such integrative work.

The Earth as Transformed by Human Action

In 1987, a symposium entitled "The Earth as Transformed by Human Action" took place at Clark University. Coordinated by members of the University's Graduate School of Geography with proceedings edited by B. L. Turner II and others, the symposium brought together dozens of leading social and physical scientists in a similar forum to that which took place over thirty years earlier with "Man's Role in Changing the Face of the Earth." The volume of proceedings is comprehensive in its scope and integrative in its methodology, reinforcing the theme set out in the opening plenary address by the

secretary of the Smithsonian Institution, Dr. Robert McC. Adams, who asserted that "the social and ecological dimensions of change form a single, embracing system that must be holistically addressed" (1990, p. x). This volume demonstrates the fact that geographers are well poised to contribute to such integrative and interdisciplinary events, following in a long tradition of such scientific collaborations.

David Lowenthal's contribution in part sets the historical context for the symposium by discussing the fragmentation in environmental thought that has characterized the 20th-century approach to human interactions with nature. In particular, he identifies the role of the public in a debate that until this century remained within only a small circle of "experts." Lowenthal indicates that there is more sensitivity among scientists to public fears and concerns, that the scientific community is less "scornful" of an "irrational, emotionally involved, hastily judgmental" public that is "fickle in its fears and enthusiasms" (1990, p. 126). However, despite growing evidence of environmental devastation, public consciousness of humanity's role is not as sustained as that of scientists; their awareness of particular issues only lasts a short time. This short-term memory problem is easily explained by the role of the media in increasing public awareness of and education regarding environmental issues. Once a crisis is replaced by an event that is considered more "newsworthy," it gets buried in the back pages of newspapers and dropped from newscasts.

Lowenthal reflects on several themes treated in this thesis, that is, the extent to which environmental issues are now perceived to be global in their scope, interconnected in their complexity, and therefore, inherently difficult to discern and solve. He identifies the interconnectedness of nature as a "central tenet" of both radical environmentalism and mainstream science (1990, p. 127), thus representing a catalyst for potential unity between these two often conflicting forces. His comments regarding 20th-century "managerial hubris" recall David Ehrenfeld's *The Arrogance of Humanism*, in which humanity's blind attachment to technological solutions is described as undermining our

efforts to undo the damage of centuries of ignorance and contributing, as a result of short-sighted vision, to the continued devastation of the earth. Lowenthal perceives three significant events that have contributed to the "polarization" that has characterized Western society's contemporary approach to the environment: (1) the publication in 1962 of Rachel Carson's *Silent Spring*; (2) Earth Day 1970; and (3) the *Limits to Growth* project, which occurred roughly simultaneously with the 1972 United Nations Stockholm Conference on the Human Environment (the ancestor of the 1992 Earth Summit).

Lowenthal also offers an articulate response to and explanation for the phenomenon of "radical" environmentalism and its apparent lack of success. "Radical Greens mistrust science, abhor technology, reprobate the materialism of modern capitalism (and communism) and the hegemony of the marketplace. Considering addiction to economic growth incurable, these reformers demand nonexploitative, non-technological communities in harmony with nature" (Lowenthal, 1990, p. 131). The strategy adopted by these groups offers little to comfort the concerned citizen: "Threats to basic livelihood make radical environmentalism increasingly unpalatable. People prefer to be gradually poisoned by industry than rapidly starved by the lack of it" (p. 132). Although there are no solutions here, the inclusion of such a critique of the "ideals" of environmentalism represents a willing response on the part of more "empirically" focused scientists to examine the values and beliefs underlying contemporary public attitudes toward nature.

It is much too soon to assess the long-term impact of this symposium. It certainly follows in a great geographical tradition of inter-disciplinary cooperation and discussion on themes of central importance to the life and future of the planet and its inhabitants. The accessibility of the book to the general public may be limited by its size and cost. But scholars will definitely find it provocative reading and relevant to the concerns of humanity at this time in our existence. Many of the themes that were covered by the symposium were also dealt with at the landmark United Nations Conference on the

Environment and Development, an event that may go down in history as a watershed in humanity's unfolding destiny.

Life After the Earth Summit

In their recent article, "Ethics and Sustainability: A Preliminary Perspective," Reed and Slaymaker reinforce Pierce's call for a more integrated geographical analysis of environment and development issues. They identify two areas in which they perceive a "hesitance" by geographers: (1) an absence of references by geographers working in sustainability to those working in development;⁵⁸ and (2) lack of participation in the intellectual debate on the ethics of sustainability (1993, p. 725). Reed and Slaymaker adopt a position that lies between "ethics as universal objectivism, where a single moral truth can be ascertained, and moral relativism which suggests that there is no rational ground for criticising different moralities or moral outlooks" (p. 725). This philosophical position appears to be a reaction against the universalism perpetuated by the "modern" scientific method which emerged out of the Enlightenment as discussed in Chapter 2 and the current post-modern approach that allows for as many moral viewpoints as there are those to express them. In this respect, Reed and Slaymaker echo Relph's critique of the moral plurality endorsed by post-modernism.

They also adopt a middle position on the anthropocentrism-biocentrism continuum (to be discussed in the next chapter), recognizing not only humanity's

continuity with the natural world, but also its distinctiveness and independence. Our notion of value is influenced by ideals which find meaning within human experience, and yet it also appeals to experiences associated with natural objects and undisturbed places. Finally, we seek a perspective which can address individual interests, as well as view collectives (either nonhuman or human) as morally significant. (1993, p. 727)

⁵⁸ This division may not be due to any epistemological or philosophical differences but rather the enormous wealth of material in each sub-field. In the research for this thesis, I deliberately avoided the works of respected development scholars like Denis Goulet, Michael Redclift, and Vandana Shiva, well-known writers who incorporate ethical or spiritual concepts in their work. The time and space constraints imposed on a graduate thesis inhibit a more thorough survey of the literature.

This vision was inspired by the work of ecological feminists such as Carolyn Merchant and Karen Warren. The ecofeminist ethic based on care, respect, and responsibility⁵⁹ “enables the recognition of interdependence and of the relationship of continuity and difference, and the recognition of both the distinctness of nature and our continuity and relationship with it. With this conception one recognizes that self is embedded in a network of essential relationships with distinct others” (Reed and Slaymaker, 1993, p. 727). With this last statement, Reed and Slaymaker highlight one of the most profound and recurring themes in the feminist critique of patriarchy, that is, the perception of woman as the “other.” In ecofeminist literature, nature joins woman in that category. These themes will be explored further in Chapter 4.

Reed and Slaymaker propose a four-scale approach (planetary, global, regional, and local) to dealing with environment and development issues and managing human and natural resources, and offer preliminary discussion of the different ethical expressions and examples of each. For the global example, they identify the 1992 United Nations Conference on Environment and Development (UNCED), otherwise known as The Earth Summit, as a “watershed,” remarking on the high hopes on all sides “that a new sense of cooperation among the industrialized and developing nations could be forged at the Summit to meet demanding environmental and development objectives . . .” (p. 731). They focus on two outcomes of the Summit that assisted in dashing those hopes:⁶⁰ (1) reticence on the part of industrialized countries to provide funds to “developing” nations to reduce the scale of environmentally destructive activities; and (2) the weakening of the biodiversity and global warming conventions by the United States’ refusal to sign the

59. Cf. discussion of St. Benedict in Chapter 2.

60. One’s perceptions of the success or failure of the Summit depend to a significant degree on one’s attitude regarding such global events and the type of media coverage that one allows to shape that attitude. For the most part, mainstream media focused more on the lack of consensus and the political impediments to which Reed and Slaymaker refer. However, there were contributions to the main sessions of the Summit and simultaneous events offering evidence that the conference was indeed a “watershed,” between previous fragmentary approaches to global issues and a new more unified vision. The universal consensus reached at the Global Forum, at which hundreds of indigenous communities and non-governmental organizations from nearly every country of the world participated, is compelling reinforcement of hope for grassroots endeavours demonstrating the power to shape human destiny.

former and only sign the latter when they were assured that countries would not be required to reduce greenhouse gas emissions.⁶¹ Reed and Slaymaker comment on the need for Western-based cultures to release themselves and others from their domination and control of the global political scene. "This relinquishment of hegemony must be coupled at the academic level with inclusion of theories which incorporate the complexity and diversity of experience about human-environment relations" (p. 731). They conclude with the already-mentioned need for geographers to contribute to discussions of environment, development, and sustainability issues that explicitly include the ethical dimension, bluntly asserting that, unless geographers incorporate ethics into their contribution, their voices "will (and should) remain muted" (p. 735).

Looking Ahead

The call for more morally responsible approaches to research is not unique to geography. Indeed, we would be remiss and unnecessarily atavistic in our discipline if we did not reflect the emerging global consciousness. As geographers, we are, if not uniquely, certainly extraordinarily qualified to cope with and attempt to explain the changes to the world as we approach a new millennium. The subdisciplines within our field reflect the diversity of human society: politics, culture, society, economics, environment (natural and built), etc. If we take advantage of the legacy left to us by past visionaries of our discipline and contemporary contributors to geographical literature, geographers or otherwise, we have the potential to be among the leaders in the process of creating the

61. A change in U.S. priorities may be occurring with the change in administration as a result of the 1992 election. The Clinton administration appears to be attempting to adopt a more "environmentally-friendly" position than its Republican predecessor with, among other reversals of former President George Bush's decisions, the June 1993 signing of the Biodiversity Convention. However, optimists must beware of naive notions that any reversals would have occurred without significant pressure. There is some speculation that the only reason the United States has signed the Convention is that those "developing" countries from which U.S. drug companies extract the primary ingredients for some of their products threatened to prevent any further "invasions" if the U.S. did not sign the treaty. This cynical, and perhaps realistic, interpretation of recent events aside, there is some reason for hope that the Clinton administration might be more sensitive to environmental issues given the sentiments expressed in Vice-President Al Gore's 1992 best seller *Earth in the Balance*.

mechanisms and policies that will lead to a more sustainable and peaceful future for all of humanity. We would do well to remember the words of John K. Wright when he offered "scholarship, as distinguished from science alone, as our *métier*. All science should be scholarly, but not all scholarship can be rigorously scientific" (1947, p. 15). Rigid attachment to one particular viewpoint, perspective, or methodology is no longer appropriate in a changing world. The following passage reflects my own views regarding the importance of scholarship in general and geography in particular in dealing with the complexities of human existence in the last decade of the 20th century:

We live in interesting times. The world order is changing. . . . Fundamental questions about the role and shape of the state are being raised. Environmental issues are back on the political agenda. Our individual lives are subject to constant and accelerating change. As academics we have a duty and a responsibility to make a contribution to this shifting terrain of argument and debate. As social scientists we have to make some kind of order from this chaos. As geographers we have a special responsibility to make sense of the ambiguities and polarities involved in the relationship between people and environment, the social and the spatial, the structural and the personal, space and place. (Lowe and Short, 1990, p. 9)

Summary

This chapter has provided an overview of the significant contributions made by many geographers in this discipline's brief history. This survey has revealed several individuals who have tried to incorporate ethical or spiritual insights into their work, manifesting the inherent capacity within the mandate of the discipline to reach beyond institutionally imposed boundaries and positivistic or quantitative methodologies, seeking alternative modes of expression and theoretical concepts to explain the most central of all geographical issues, the relationship between human beings and the landscape. Forgotten and marginalized scholars find common ground with those who have been celebrated within the discipline in many of the more qualitative aspects of geographical enquiry.

The division of geography into "human" and "physical" streams has led to a collective identity crisis that has resulted in the interdisciplinary approach of environmental studies fulfilling the role that could *naturally* have been geography's mandate. It is not too late

for geographers to recapture that lost opportunity to forge links with other academic fields in their respective concern for and study of the natural environment. This thesis is one effort to contribute to that endeavour by examining the links among several approaches to human interactions with the rest of creation. The next chapter attempts to "make sense of the ambiguities and polarities" inherent in moral and spiritual approaches to dealing with the environment.

Chapter 4

The Map

This chapter offers a map that organizes the enormous body of material comprising this field. It also represents a spatial model from which other researchers may conduct their own analyses into environmental ethics. For the current work, it offers an organizational framework based on one interpretation of the diverse approaches that enables one to see at a glance the numerous avenues of possibility available to assist in the development of a holistic, comprehensive, integrated, and sustainable global environmental ethic.

The theoretical concept applied in this thesis, which will be explained further in the next chapter, is unity in diversity. The diversity of philosophical and spiritual approaches to the environment has resulted in an apparent fragmentation of views, thus inhibiting unified and constructive solutions. This chapter presents the essential tenets of the following perspectives: deep ecology, social ecology, ecofeminism, ecological humanism, animal rights activism, reform environmentalism, "green" marketing and consumerism, bioregionalism, Native spirituality, Judeo-Christian theology, and the Baha'i perspective on nature.⁶² The goal of this phase of the research is to determine, based on analysis of the various approaches, if there is sufficient common ground upon which to build such a universal ethic. Questions for readers to consider while reading

62. Two omissions from this discussion are "green" politics and environmental management strategies such as ecological restoration, the former because fragmentation within the field inhibits a generalized conception that can allow for one clear position on the map and the fact that some of those approaches included have a political wing, and the latter because of its relative lack of sufficient data from which to determine its possible location in this discussion. For a general overview of "green" politics in Europe, where efforts are more evident than in North America, see Capra and Spritnak, 1984. For overviews of ecological restoration, see Merchant, 1992 and Cowell, 1993.

about the various philosophical approaches outlined in this chapter have been proposed by Frederick Ferré in his introduction to *Religion and Environmental Crisis*:

To what extent are we human beings . . . transcendent over or beyond nature, and to what extent are we fully immanent in natural process? Is there intrinsic value in nature? If so, what is its character and source? If not, what (if anything) should restrain us from all-out exploitation of the earth? Are the grounds for the ethical constraints to be found within or beyond the realm of nature?

. . . Where is the power to heal the actual in light of the ideal? (Hargrove, 1986, p. 6)

Origin and Explanation

The field of environmental ethics is vast and complex. There are dozens of writers being published in a variety of journals, the most useful of which is *Environmental Ethics*. Writers are also producing books and anthologies, and are participating in conferences, some of whose proceedings also make significant contributions. The result is a wealth of literature upon which to base one's own work. The research undertaken for this project and the subsequent attempt to organize it has resulted in a four-quadrant framework that builds upon the Timmerman (1990) organizational framework presented in *Planet Under Stress*. Timmerman discusses the diversity among radicals and conservatives that is manifested by swings between the political left and right, and a vertical swing from shallow to deep expressions of environmentalism, creating the following diagram:

Instead of using the political left and right continuum shown above, the map (see Figure 1) employs terms that characterize human perceptions of and motivations regarding the place of nature in relation to humans. Thus, one finds anthropocentrism (the view that considers human beings to be the most significant entity in the universe and

Figure 1 Map of Selected Environmental Ethics

interprets or regards the world in terms of human values and experiences [*Webster's Collegiate Dictionary*, 1990]) and biocentrism (the view that considers the entire biosphere as a whole more significant than any individual living species and considers rights and values in terms of the whole rather than its constituent parts) occupying the extreme ends of the horizontal axis, with ecocentrism (the view that emerges from an ecological understanding of the earth in which the individual components in all their diversity are essential to the health of the whole and considers rights and values in terms of the healthy integration between the individuals and the entire community) somewhere in the middle.⁶³ Timmerman's work inspired the development of a framework that combines these philosophical positions with the extremes represented by various so-called "deep" approaches to the environment (most widely represented by the various applications of deep ecology) and the more "shallow" applications that offer little if any understanding of the spiritual and moral factors inherent in human interactions with the natural environment. The shaded areas around the perimeter of the map, which will be discussed further below, represent positions that may exist in the actions of certain individuals or organizations but are not potential sustainable ethics. Rather than a static, rigid diagram, the map is intended to be fluid and, of course, is subject to reinterpretation. Arrows demonstrate areas where positions have either shifted over time, are in a continuing state of flux, or are internally fragmented and diverse in their expression. Dotted lines indicate the directions of ideological influence between certain movements.

63. By defining biocentrism and ecocentrism in this way, I am attempting to offer an "objective" definitional foundation for the discussion. This distinction also represents a departure from O'Riordan's characterization of the debate, in which he, like other scholars, does not distinguish between biocentrism and ecocentrism. See also Merchant, 1992, pp. 74-81. Others offer their own subtle permutations of either philosophical position to define more specifically their own views. Bill Devall appears to use "ecocentrism" to define a position that I would describe as biocentric: "Ecocentrism means rejecting the position that some life forms (such as humans) have greater inherent worth than other life forms" (1988, p. 15). This example highlights the need for understanding and common ground in terms of the language used in a debate of this kind. The map and discussion offered in this thesis are my contribution to a better understanding of many of the concepts underlying environmental ethics, and my attempt to foster harmony among the participants in the debate, thus offering a means by which they might unify their efforts and achieve more than they will while they remain fragmented.

Leopold's Legacy: Integrity, Stability, Beauty, and Community

The following sections will describe those approaches that have explicitly or, in my view, implicitly responded to Aldo Leopold's "Land Ethic" essay which was highlighted in Chapter 2. The discussion focuses on most of those positions that appear on the bottom half of the map. (The more "religious," as distinct from "spiritual," approaches to nature such as Native, Judeo-Christian, and Bahá'í, which occupy the center core of the map, will be discussed following the presentation of the other positions.) In some cases, the approaches represent a counterpoint to many themes raised by the land ethic's most famous offspring, deep ecology. In others, they are "environmental" offshoots of more widespread social movements attempting to transform the prevailing Western paradigm.

Deep Ecology: Diversity without Unity?

Many contemporary environmental philosophers have expanded different elements of Leopold's now-famous statement ("A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."), developing theories or movements based on integrity, stability, aesthetics, and/or community as the basic concepts central to sustainable management of or hands off approaches to the environment. One of the most widely discussed and criticized movements is "deep ecology," a term coined by Norwegian philosopher Arne Naess in 1974. Naess contrasts deep ecology with more "shallow" approaches in terms of their perspectives on pollution, resource depletion, population growth, cultural diversity, and a variety of other issues related to human society. For Naess, the shallow perspectives reflect a central objective that is oriented toward improving the health and affluence of people in so-called developed countries. Rather than an academic, philosophical theory, Naess and his followers see deep ecology as a social movement that includes many types of people who share similar attitudes and lifestyles primarily characterized by a deep and spiritual (but non-orthodox religious) approach to the earth and its inhabitants.

The movement is based on eight principles developed by Naess and George Sessions, who, with Bill Devall, introduced and has promoted deep ecology across the United States for the last decade. The principles, which appear in numerous publications, are:

1. The well-being and flourishing of human and non-human Life on Earth have value in themselves. . . . These values are independent of the usefulness of the non-human world for human purposes.
2. Richness and diversity of lifeforms contribute to the realization of these values and are also values in themselves.
3. Humans have no right to reduce this richness and diversity except to satisfy vital needs.
4. The flourishing of human life and cultures is compatible with a substantially smaller human population. The flourishing of non-human life requires a smaller human population.
5. Present human interference with the non-human world is excessive, and the situation is rapidly worsening.
6. Policies must therefore be changed. These policies affect basic economic, technological, and ideological structures. The resulting state of affairs will be deeply different from the present.
7. The ideological change will be mainly that of appreciating life quality . . . rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between bigness and greatness.
8. Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes.

Various promoters of deep ecology have offered their own explanations and interpretations of each of these principles (see Devall and Sessions, 1985; Devall, 1988; Naess, 1989 and 1993); opponents have offered critiques (see Bookchin, 1989 and 1991); and others have presented discussion of the movement and its principles in a more neutral fashion (see Nash, 1989 and Merchant, 1992).

The most significant distinction between the deep ecology approach and other environmental ethics is its emphasis on the community or the entire biosphere with an accompanying neglect or ignorance of the rights of individuals within the system. This position is an explicit condemnation of the anthropocentric or human-centered thinking that emerged out of the mechanistic vision of the universe. It is also an alternative to the "reform" environmentalism of the 1960s and 1970s that adherents of deep ecology view as symptom-directed rather than addressing the foundations of the crisis itself. For deep ecologists, human beings are an integral part of nature, not above or outside of it. There

is a fundamental fragmentation within the movement on this subject as the more extreme deep ecologists assert a rigid egalitarianism in which no one species has greater value than another (what I call a biocentric position), and the more reflective or theoretical deep ecologists who attempt to apply the thinking of Aldo Leopold and adopt what I would call a more ecocentric position which integrates an understanding of the ecological factors in nature that scientifically support a notion of natural hierarchy without allowing justification for one species' dominance over another.⁶⁴

As a critique of the mechanistic tendencies that have governed human affairs over the centuries, deep ecology has made a profound impact on environmental thought. As a philosophical approach, it represents a significant movement forward in attitudes to and increased understanding of the impacts of human behaviour on the natural environment. Indeed, Naess has stressed the movement's normative mandate and its distinction from the scientific approach of ecology:

It should be fully appreciated that the significant tenets of the Deep Ecology movement are clearly and forcefully *normative*. They express a value priority system only in part based on results (or lack of results) of scientific research. (Quoted in Devall, 1988, p. 23)

This explicitly normative agenda is one of the reasons that deep ecology can be viewed as both a success and a failure. It has certainly succeeded in raising public awareness of the philosophical foundations for human interactions with the rest of creation. However, in practice, it has failed to offer a unified, systematic, and comprehensive program by which the spiritual, psychological, social, political, and economic problems that have contributed to the environmental crisis can be addressed. The application of the principles of deep ecology in "real life" beyond the individual level has led to a plethora of activist

64. On the whole, however, despite drawing from certain aspects of ecological science, deep ecology rejects any concept of natural hierarchy. The movement derives some of its scientific inspiration from the Gaia hypothesis, which conceives of the earth as a complex biological organism that consciously regulates itself to ensure its survival. The Gaia hypothesis has been more successful as a metaphor for spiritual inspiration (Gaia was the ancient Greek earth goddess) in the environmental movement than as a widely accepted scientific concept or theory. It is subsumed within deep ecology in this thesis since its placement on the map would imply that it offers insights on a normative level, which, although perhaps implicit within the work of its proponents, is not explicit in the formulation of the hypothesis itself.

organizations, the most extreme of which are Greenpeace and Earth First!. These organizations (only mentioned here as examples of the lengths to which some environmentalists are willing to go to promote their cause) could be placed on the map at various points along the arrows radiating out of deep ecology itself and approaching the fringes of the framework. Despite their high profile in stimulating public awareness of various environmental atrocities that have occurred during the last few decades, their methods merit rigorous scrutiny. At times in each organization's history, activists have jeopardized their own lives and those of innocent people to achieve their aims. The Earth First! practice of spiking trees and sabotaging forestry equipment in the American Northwest has sparked furious public debate.⁶⁵ A published dialogue between Dave Foreman, the founder of Earth First!, and Murray Bookchin, the founder of social ecology, reveals the complexity of the issues with which environmental activists are dealing, their often shortsighted and ill-informed attitudes toward the issues in which they involve themselves, and, fortunately, their willingness to recognize past mistakes and future points of common ground with their opponents (Bookchin and Foreman, 1991).

One difficulty with the deep ecology approach is that it rejects the hierarchy inherent in nature (e.g., the food chain, the balance intrinsic to predator/prey relationships) and fails to offer solutions to current problems or alternatives to the current system. Although the deep ecology movement has been instrumental in raising public awareness of environmental issues, its efforts, as demonstrated above, are often counter-productive to upholding its principles. One of the reasons for this gap between theory and application in the deep ecology movement is that the ethic it is based on fails to redefine the role of the individual human and human institutions. In the introduction to the Bookchin/Foreman debate, Steve Chase synthesizes deep ecology's fundamental flaws:

⁶⁵ These activities are called "ecotage" and "monkeywrenching" by their advocates. For an overview of the rationale behind such actions, see Devall, 1988, pp. 138-50 and Dave Foreman's remarks in Bookchin and Foreman, 1991.

Indeed, the deep ecology movement *as a whole* lacks a consistent or clear social analysis of the ecology crisis or even a consistent commitment to humane social ethics. Anarchistic ecotopian visions coexist with potentially chilling and authoritarian perspectives as well as calls to completely "unmake civilization" and return to hunter and gatherer societies everywhere on the planet. (1991, p. 20; see also Norton, 1991, pp. 220–29)

This lack of unity at the theoretical and practical level is due to the internal fragmentation in the movement with some deep ecologists adopting more reflective and spiritual means of expressing their beliefs and others engaging in more extreme methods of direct action. The impact of the movement on contemporary environmentalism cannot be disputed. Despite the potential harm done to the movement by its more extreme advocates, deep ecology has offered a set of principles from which can be drawn themes that may be applicable to a global sustainable environmental ethic.

Social Ecology: Reinstating Humans into Nature

As mentioned above, the most well-known proponent of social ecology, Murray Bookchin, participated in a dialogue with one of the more notorious deep ecologists, now former Earth First!er Dave Foreman. This dialogue was coordinated as an attempt to clarify and to elaborate on some of the accusations that had been made on both sides in previous years and in various publications (see Chase in Bookchin and Foreman, 1991 for an overview of the context of the debate). Almost at the same time that Arne Naess took his philosophical stance against "reform" environmentalism in the 1970s, Murray Bookchin also drew the distinction between this so-called "shallow" approach and more radical political "ecologism." Adopting the term "social ecology," which first appeared in print in E. A. Gutkind's contribution to the "Man's Role" symposium described in Chapter 3, Bookchin promotes a vision of ecology as a framework for social change, setting himself apart from the deep ecology movement and spiritually based approaches to the environmental crisis. Bookchin criticizes deep ecology for its "antihumanistic image of human beings as interchangeable with rodents and ants" (1989, p. 11) and its

ignorance of the social and political inequalities and injustices that permit human impoverishment. To Bookchin, "terms like 'oneness' and a 'biocentric democracy' go hand-in-hand with a pious formula for human oppression, misery, and even extermination" (1989, p. 12). He also expresses strong condemnation for certain expressions of spirituality that "may often mean a decent, indeed, a wholesome sensitivity to nature and its subtle inter-connections . . . [is degenerated] into an atavistic, simple-minded form of natural religion peopled by gods, goddesses, and eventually a new hierarchy of priests and priestesses" (1989, p. 12). Bookchin is suspicious of any ethic that promotes the worship of a natural or supernatural being, thus allowing for domination in one form or another. "The moment human beings fall to their knees before any thing that is 'higher' than themselves, hierarchy will have made its first triumph over freedom, and human backs will be exposed to all the burdens inflicted on them by social domination" (1989, p. 13). He calls for an ecological vision that is rooted in social theory and criticism, offers a program for social reconstruction, and provides the means for remaking society to benefit nature and humanity.

Bookchin offers several important insights into many of the themes that are treated in this thesis. His critique of deep ecology, although harsh, is, for the most part, well placed. He challenges deep ecologists (and others) to ponder the following:

Perhaps the biggest question that all wings of the radical ecology movement must satisfactorily answer is just what do we mean by "nature." If we are committed to defending nature, it is important to clearly understand what we mean by this. Is nature, the real world, essentially the remnants of the Earth's prehuman and pristine biosphere that has now been vastly reduced and poisoned by the "alien" presence of the human species? Is nature what we see when we look out on an unpeopled vista from a mountain? Is it a cosmic arrangement of beings frozen in a moment of eternity to be abjectly revered, adored, and untouched by human intervention? Or is nature much broader in meaning? Is nature an evolutionary process which is cumulative and which *includes* human beings? (Bookchin and Foreman, 1991, p. 32)

The dehumanizing or inhumane aspects of radical biocentric attitudes have already been discussed. The effects of human activity that exploits nonhuman nature are also well

documented. Bookchin addresses both extremes, critiquing the opposing views of humanity as a "blight on nature" and as "the lord of creation" for being equally "sinister."

Both views serve to pit humanity against nature. . . . Humanity . . . is plucked out of the evolution of life and placed on a shelf like an inanimate object. Isolated from the world of life with either curses or praises, it is then dispatched back into a primal world of the distant past or catapulted up to the stars, regaled with space suits and exotic weapons. Neither of these images touches upon an all-important fact: human beings exist in various *societies*, all of which are profoundly relevant to our ecological problems. As social beings, humans have developed ways of relating to each other through *institutions* that . . . determine how they deal with the natural world. (1989, pp. 16-17)

Bookchin makes a crucial point: it is not human nature to destroy the natural world, but rather the institutions that have arisen in an increasingly complex social and political milieu that create the conditions for human exploitation of the earth and each other. The problems exist within the institutional system itself, not within the human psyche.

Two of Bookchin's significant contributions to the debate offer rational analysis of the distinctions between (1) anthropocentrism and biocentrism and (2) "first" or "wild" nature and what he calls, "second" or "social" nature. On the first point, his remarks are made in defence of the attack he has received from deep ecologists.⁶⁶ He responds:

. . . to those who dismiss me as "anthropocentric," I must ask: Why must I be forced to choose between "biocentrism" and "anthropocentrism?" I never believed that the Earth was "made" for human exploitation. In fact, as a dyed-in-the-wool secularist, I never believed it was "made" at all. I also don't believe that humans should "dominate" nature. . . . Given my long-standing fascination with the wonders of natural evolution . . . , what need do I have for a "biocentrism" that deflects me from the social roots of the ecological crisis? I believe that non-human and human nature are as inextricably bound to each other as the ventricles of the heart are bound to the auricles and that both human and non-human nature deserve moral consideration. (1991, p. 128)

Bookchin asserts that human beings are "inextricably bound" to nature since they have developed through natural evolutionary processes and, in turn, developed their own

66. Bookchin receives support in his defence of a "naturalistic" form of anthropocentrism from biologist René Dubos: "When the critics of anthropocentrism scornfully state that certain environmental practices will make the Earth suitable only for rats, roaches, and ragweed, they express a human judgement that vermin and weeds do not deserve to inherit the Earth—even though most of these species are endowed with remarkable biological attributes. In evaluating ecological situations, we cannot avoid making judgments of values and we naturally give preference to human values" (1989, p. 61)

social systems. Systems and institutions that have ignored the natural foundation upon which they are based have created warped or distorted expressions of "second nature."

His anarchism is revealed in a critique of liberalism and Marxism, their hierarchical organizations of society, and their domination of humans by humans and nature by humans. He views social ecology as an ally with feminism, especially in challenging hierarchy and demystifying certain notions of "civilization" (1989, pp. 154-57). Despite its denouncement of hierarchy, social ecology embraces and indeed advocates the need for diversity in life. "Ecological diversity . . . does not rest on conflict; it rests on differentiation, on the wholeness that is enhanced by the variety of its constituents. Socially, this view is expressed in the Greek ideal that the complete, many-sided person is the product of a complete, many-sided society" (Bookchin, 1989, p. 172). This vision of society represents social ecology's expression of the concept of unity in diversity. Bookchin emphasizes that "our foremost need is to create a general human interest that can unify humanity as a whole, . . . centr[ed] around the establishment of a harmonious balance with nature" (1989, p. 171).

Social ecology offers an attractive vision and program of solutions to the contemporary spate of social problems. It has two flaws from this writer's standpoint: (1) its poorly articulated concept of spirituality and (2) its emphasis on transformation at the societal level.⁶⁷ Social ecology appears to neglect the fact that the building blocks of societal transformation are individuals. The vision of social ecology is primarily secular. In essence, it is an anarchistic form of secular humanism, overlooking the spiritual force required for the successful completion of its agenda. Despite this drawback, social ecology offers a rational, ecological alternative to the dehumanizing tendencies of the deep

67. Critiques of social ecology and Bookchin come primarily from those who advocate a biocentric as opposed to ecocentric vision. See the published version of the Bookchin/Foreman debate (1991) and Ekersley, 1989.

ecology movement, allowing for the reintegration of human beings into the rest of creation as a natural part of the evolutionary process.⁶⁸

Ecofeminism: Reinstating the Feminine and the Natural into Humanity

As noted above, social ecology finds a significant amount of common ground with feminism in its critique of the prevailing societal system. Indeed, the concept of ecofeminism was developed by Ynestra King at the Institute for Social Ecology in 1976.⁶⁹ Since then, it has grown and developed, setting itself apart from other environmental movements, presenting itself as the only ecological vision that links men's domination of women with humanity's domination of nature. Indeed, some ecofeminists have been brutal in their attack of nonfeminist environmentalism, especially deep ecology. "The deep ecology movement is shockingly sexist." This provocative statement opens an angry ecofeminist tirade against the prevailing male-dominated Western society. The writer goes on to say that "the deep ecology movement is tragically whacked out of balance, off the axis in its omission and exclusion of ecofeminist scholarship" (Doubiago, 1989, pp. 40, 43). Another writer expresses her critique more diplomatically:

The deep ecology movement, by using the generic term *Man*, simultaneously presupposes the difference between the sexes in an uncritical way, and yet overlooks the significance of this difference. It overlooks the point that if women's lived experience were recognized as meaningful and were given legitimation in our culture, it could provide an immediate "living" social basis for the alternative consciousness which the

68. For other insights into Bookchin-inspired social ecology, see Clark, 1980. Merchant (1982) expands the term "social ecology" beyond the anarchistic vision of Murray Bookchin to include all environmental movements that are founded upon critiques of the social system. Thus, her characterization distinguishes among advocates of Marx' and Engels' theories, the economically based "socialist ecology" of James O'Connor, and "dialectical biology." However, Bookchin and his followers offer the most broadly articulated vision and stimulate more debate in both popular and academic literature. Therefore, it is their position that is represented on the map.

69. King developed the concept to fill in some of the gaps in social ecology. "Ecofeminism develops the connections between ecology and feminism that social ecology needs in order to reach its own avowed goal of creating a free and ecological way of life" (1989, p. 19). In addition to King's work at the Institute for Social Ecology in the 1970s, Carolyn Merchant's *The Death of Nature* (1980) is widely seen as a landmark publication for its penetrating analysis of the Scientific Revolution. Merchant explicitly links women and nature, and the feminist and ecology movements in her cogent reinterpretation of history and the values that underlie contemporary Western society.

deep ecologist is trying to formulate and introduce as an abstract ethical construct. (Salleh, 1984, p. 340)⁷⁰

Despite these critiques, there is a fair amount of common ground existing between these two anti anthropocentric approaches. Deep ecology could certainly benefit from current trends in society and the growing popularity of ecofeminism by integrating a gender-sensitive critique into its tenets.⁷¹ Ecofeminists could also benefit from building rather than burning bridges between themselves and other groups that share their sensitivity to the feminine qualities inherent in nature, even if the other groups do not specifically identify those qualities as feminine. As eloquently demonstrated by the two modes of expression cited above, the tactics employed by some radical feminists will continue to undermine an otherwise rational and necessary critique of the prevailing paradigm.

Merchant distinguishes among various forms of feminism (cultural, liberal, social, and socialist), explaining how each has contributed to ecofeminism (1992, pp. 184-98). It is beyond the scope of this thesis to discuss each substream specifically. Nor is it possible to survey all ecofeminist writings. In some cases, the subdivisions within feminism merely present a gender-sensitive critique of a specific stream in society, thus perpetuating the status quo in a less patriarchal form. The location of ecofeminism on the map is designed to highlight those aspects of the overall movement that are most constructive to a unified environmental ethic rather than to represent the various interpretations that subdivide feminism in general. Placing the numerous subsets of feminism on the map would result in clutter and confusion.

70. See also Gray, 1981, pp. 32-33 for a discussion of gender-neutral and "feminized" language in reference to nature. For other contributions to the deep ecology-ecofeminism debate, see Cheney, 1987; Zimmerman, 1987; Fox, 1989; and Salleh, 1992.

71. Merchant disagrees: "Could deep ecology be cured of its antifeminist bias through greater sensitivity to its own language and analysis? The answer is no. This would be a mere bandaid" (1992, pp. 104-5). Despite my own sympathy with many ecofeminist principles, I perceive great potential between the two approaches to reconcile their differences through a unification on those points which they share. As society becomes more aware of and sensitive to the injustices of many Western practices and institutions, the alternatives will provide an attractive foundation upon which to build a more just civilization, but only if those alternatives can offer a unified vision. There are aspects of all of the philosophies presented in this thesis that simultaneously offer potentially unifying and divisive visions. The challenge, if we are to get past the prevailing fragmentation, is to focus on the unifying potential within the diversity of critiques to mend the rifts in the social and natural fabric.

As mentioned above, ecofeminism focusses its attention on the links between male domination of women and humanity's domination of nature.⁷² Karen Warren identifies four ecofeminist claims: (1) there are important connections between the oppression of women and the oppression of nature; (2) understanding the nature of these connections is necessary to acquire understanding of both forms of oppression; (3) feminist theory and practice must include an ecological perspective; and (4) solutions to ecological problems must include a feminist perspective (1987, pp. 4-5; see also King, 1989, pp. 23-24). Elsewhere, Warren demonstrates the pluralism inherent within the ecofeminist approach, which not only "recognizes the multiple voices of women, located differently by race, class, age, [and] ethnic considerations" but also "centralizes those voices," building on those perspectives that have been "omitted or undervalued" in social dialogue. She sees the ecofeminist perspective as "structurally pluralistic, inclusivist, and contextualist, emphasizing through concrete example the crucial role context plays in understanding sexist and naturist practice" (quoted in Merchant, 1992, p. 185).

In contrast to the deep ecology movement, and like social ecology, ecofeminism offers a systematic, comprehensive vision for reorganizing society along allegedly more equal and just grounds. In terms of practical applications, ecofeminism is reflected in holistic health techniques, spirituality explored in old and new forms, considering the ecological consequences of lifestyles and personal habits, and participation in nonviolent civil resistance to political oppression (King, 1989).

Petra Kelly and Ynestra King both explicitly draw attention to the concept of unity in diversity in their respective contributions to the ecofeminist anthology *Healing the Wounds*. In her foreword to the book, Kelly refers to the concept as "most important . . . in times of social simplification" (1989, p. xi). King links ecofeminism with

72. Two essential readings for scholars of ecofeminism develop this theme in very different but equally relevant styles. Merchant's *The Death of Nature* (1980) examines and critiques the legacy of the Scientific Revolution in a standard academic fashion. In *Green Paradise Lost* (1981), Elizabeth Dodson Gray offers a more subjective account and critique, weaving throughout her scholarly discussion personal anecdotes that highlight the subject of her critique.

ecology through unity in diversity, stressing the necessity of diversity in nature and lamenting the environmental simplification that is a major effect of industrial technology. She also criticizes the simplification of human culture and community that results from the marketing of the same products all over the world. "Ecofeminism as a social movement resists this social simplification through supporting the rich diversity of women the world over, and seeking a oneness in that diversity" (1989, p. 25). The potentially unifying vision expressed in this anthology does not go unchallenged, however. Christine Cuomo criticizes the "unexplained" call for unity in diversity for apparently encouraging a diversity of perspectives that makes unity impossible (1992, p. 359). One concept that has been identified as a potential unifier of the "many strands of the ecofeminist movement" is reproduction, "construed in its broadest sense to include the continued biological and social reproduction of human life and the continuance of life on earth. In this sense there is perhaps more unity than diversity in women's common goal of restoring the natural environment and quality of life for people and other living and nonliving inhabitants of the planet" (Merchant, 1992, p. 209).

One concern that I have of the feminist movement is the conceptual limitations that are imposed when scholars like King and Merchant explicitly (but not necessarily intentionally) exclude men from their vision. Phrases such as "supporting the rich diversity of *women* the world over, and seeking a oneness in that diversity" and "*women's* common goal of restoring the natural environment and quality of life" threaten to limit the impact of the ecofeminist vision by implying that men are not part of humanity's rich diversity and do not share women's goal of restoring the natural environment and quality of life. True unity will be achieved when feminists can confidently use the word "people" without worrying that women will be forgotten, or can include men in such otherwise unifying comments.

Fragmentation within Anti-Anthropocentrism

The environmental ethics debate over the last two decades has centered around various interpretations, applications, and criticisms of many of the themes contained in the eight principles of deep ecology. Social ecology bases its critique on deep ecology's apparently dehumanizing biocentric egalitarianism. Ecofeminists, diverging perspectives within deep ecology, and less theoretically based environmentalists such as the animal rights movement offer differing viewpoints regarding aspects of moral philosophy. Contributors to the debate base their arguments on interpretations and assessments of notions such as individual vs community and intrinsic vs instrumental value.

As stated earlier, the debate began with Aldo Leopold's critique of the economic exploitation of natural resources for human development. His essay was the first contemporary articulation of a nonanthropocentric ideal, promoting an awareness, appreciation, and understanding of the natural biotic system upon which human civilization is based and depends. Deep ecologists have followed that tradition, focussing on the biotic community as the priority and preservation of that system through the application of ecological knowledge.

Holmes Rolston III offers a clarification of the biocentric focus of the land ethic and deep ecology. He stresses the importance of the individual in the community and the importance of the community in protecting the interests of the individual. By making such a distinction he avoids the attack arising from animal rights activists that will be discussed below. Rolston says, "The picture we need . . . is of community that packages everything up into individual lives and binds them together loosely (that is, freely) enough that individuals remain gems in a setting, yet tightly enough that the generating, maintaining system is prior to individual life" (1987, p. 265). And again, "Individual welfare is both promoted by and subordinated to the generating community forces" (p. 268). For Rolston, the whole is much greater than the sum of its parts, and the

uniqueness in nature (never producing two of a kind exactly alike) is its greatest strength. Humans, as part of the natural system, must recognize, respect, and foster that diversity.

William Blackstone concurs with Rolston that a purely community-focused ethic results in the denial of certain individual rights and that some life must be sacrificed to ensure the survival of the whole (1980, p. 305). Blackstone dissociates himself from purely biocentric or anthropocentric positions by acknowledging a natural hierarchy in the biotic system and calling for a more rigorous examination of how human beings deal with that hierarchy. "In order to understand man's place in the scheme of things—and that of animals, plants, soils, and rivers—we require some theory of the scheme of things, an enlightened metaphysic" (Blackstone, 1980, p. 325).

Blackstone also deals with utilitarianism, the philosophical position based upon the promotion of the greatest good for the greatest number. Blackstone calls for an ethic of "ecological utilitarianism" to consider the welfare of every form of life that is capable of suffering. Environmental policy decisions would thus be based on "acts or kinds of acts [that] will maximize the welfare of every form of life" (1980, p. 330). Blackstone's recognition of natural hierarchy and his criticism of the prevailing system were important contributions to the literature 10 to 15 years ago. Unfortunately, Blackstone died prematurely just as environmental ethics was emerging as a formal academic field.

The still unresolved debate over individual and community rights also contains within it an equally contentious debate regarding inherent/intrinsic⁷³ vs instrumental value. In fact, the concepts of rights and values, inherent or endowed, have been the primary components in philosophical debates for the last three hundred years. It is far beyond the scope of this thesis to offer a synthesis of this complex and at times overly abstract debate. However, discussion of these themes has entered environmental ethics, and therefore, at least a brief introduction to the contributors is appropriate.

73. Although some philosophers may dispute the extent to which these terms are synonymous, in the following discussion, inherent and intrinsic are used interchangeably.

The permutations within the debate are presented on the various sides of the animal rights conflict, especially in the writings of Peter Singer (1980) and Tom Regan (1982). Regan has also collected articles in anthologies on aspects of environmental ethics (1980 and 1984). Holmes Rolston III (1986 and 1988) and J. Baird Callicott (1989) also make significant contributions. Christopher Stone (1987) offers insights from the perspective of law. Merchant (1992) presents a fairly clear overview of how various anti-anthropocentrists apply notions of rights and value in non-human species. The debate essentially comprises differing aspects of the extent to which rights exist inherently within species or individual members of a species, which species (based on various criteria) possess rights inherently, and to what extent inherent rights become instrumental values when human beings enter the equation.

Colwell (1987) examines some pragmatic aspects of ethical debate in what he calls "naturalistic philosophy," which is based on an integration of nature and human culture and which views nature as one sole complete reality (p. 104). In Colwell's view, "the question is not whether values are derived from nature, but rather how fully the derivation process reaches into nature, and how adequately that reach can be evaluated. Unless the cultural institutions through which humans live provide an access to nonhuman biophysical subject matter in the moral evaluation of both ends and means, and indeed integrate it into human subject matter, naturalism remains . . . a mere social humanism, and not an ecological humanism" (1987, p. 109).

Colwell criticizes those radical anti-anthropocentrists who ignore the role of human beings in the progress and development of creation. The deep ecologist claim that human beings are part of nature ignores those aspects of being human that transcend fundamental limits within nature. When social ecologists and ecofeminists reject hierarchy in human systems, they deny the natural hierarchy that allows for the balance and tension between predator and prey that perpetuates evolution. One way of reconciling these problems is to view human beings as connected to nature through an interdependent relationship:

In naturalism, the human organism's directive powers of sense and thought are themselves part of nature. . . . Mind in nature is not the personal, subjective property of the individual apart from the existential environment; it is a function of the inseparable connectedness each organism enjoys with its surroundings. This connectedness is partly in the organism's exploration of the environment, but it is also in the environment's reciprocal effects upon the organism. The human task of thinking about, appraising, and valuing its activity within nature is centered in this two-way connectedness; it is not a subjective activity, though personal feeling, thought, and movement are obviously involved. Being "mindful" of one's surroundings is not anthropocentric or merely utilitarian: it requires attention to the conditions of other natural components in terms of consequences for both self and other. . . .

Our interdependent beliefs and values are ultimately justified by the relationship they have with concrete environmental conditions. It is this relationship that puts us in touch with "facts" as the basis of value judgements. (Colwell, 1987, p. 107)⁷⁴

Ecological Humanism

Colwell's article promoting a naturalistic philosophy includes a term Henryk Skolimowski used first in 1981. Skolimowski's work in environmental ethics is relatively obscure. His book *Eco-Philosophy: Designing New Tactics for Living* has received less attention than it probably deserves. A review by deep ecologist George Sessions in *Environmental Ethics* was somewhat mixed (1984). The book is an attempt to respond to Western society's construction of "a deficient code for reading nature, leading to a deficiency in interacting with nature." Skolimowski roots the causes of contemporary environmental, economic, social, and political crises in "the very foundations of our scientific world view; and in the very perceptions which this worldview engenders" (1981, p. vii).⁷⁵ He proposes a new, "eco-philosophy," which "marks a return to the great tradition of philosophy—the tradition that takes upon itself large tasks and attempts to be culturally significant," offering his ideas as a challenge to

74. This integration of the moral and the empirical is expressed elsewhere in recent articles that promote a reexamination of William James' pragmatism. See Weston, 1992a and Fuller, 1992.

75. Essential but not central to Skolimowski's argument is a critique of contemporary philosophy. His attack on certain major academic institutions in Britain and the United States and the analytical philosophy practised there is brutally eloquent: "The last forty years of the debate therefore represents tedious scholasticism resolving itself in pedantic linguistic exercises. The trivialization of problems and of minds is the price we pay for spurious technical virtuosity" (1981, p. 20). This critique may explain his lack of participation in and acceptance by mainstream environmental ethics.

philosophers and non-philosophers alike to engage in "creative combats and lively encounters" to produce new insights and truths (1981, p. 26).

Skolimowski presents twelve characteristics of eco-philosophy in contrast with their counterparts in "present" philosophy. Essentially, eco philosophy is: (1) life oriented rather than language oriented; (2) committed to rather than detached from human values, nature, and life itself; (3) spiritually alive rather than spiritually dead; (4) comprehensive and global rather than piecemeal and analytical; (5) wisdom- as opposed to information driven; (6) environmentally and ecologically conscious in contrast to contemporary philosophy which is largely oblivious to such concerns; (7) aligned with the economics of the quality of life whereas academic philosophy in the West is aligned with an economics of material growth; (8) politically aware rather than politically indifferent; (9) socially concerned rather than socially indifferent; (10) vocal rather than silent on individual responsibilities; (11) tolerant of transphysical phenomena rather than simply interested in the physical aspects and manifestations of human existence; and (12) health conscious rather than ignorant of such matters (1981, pp. 28-49).

Skolimowski's application of these principles in environmental ethics results in his vision of an integration of ecology and humanism, both of which he says have ignored the salient fact that "the plight of the environment and the plight of man both have the same cause" (1981, p. 53). Rather than an arbitrary conjunction, Skolimowski views the integration of ecology and humanism as a manifestation of the "unity of the natural and the human world," in which nature is invested with the same "value" as humanity because they are both part of one cosmological vision. He advocates "evolution centred" cosmology as opposed to biblical theocentrism, anthropocentrism, or matter centred, positivistic approaches to science. Human beings are important not in their own right but as "shining particle[s] of the unfolding process of evolution" (p. 74). His conception of the human is of something that has been transformed through the evolutionary process into an "intricate, subtle, and marvelous" being that embodies, maintains, and attempts to

refine itself and the rest of creation as part of its sacred mandate. The relationship between the human and the rest of the cosmos is intertwined in a cycle that has culminated in the existence of humanity in its present and on-going evolution:

The sacredness of man is the uniqueness of his biological constitution which is endowed with such refined potentials that it can attain spirituality. The sacredness of man is his conscious awareness of his spirituality and his inner compulsion to maintain it. The sacredness of man is the awareness of the enormous responsibility for the outcome of evolution, the evolution which has culminated in us but which has to be carried on. Man is, in a sense, only a vessel, but vested with such powers and responsibilities that he is a sacred vessel. (p. 75)

In his discussion of the values that are derived from and apply to this vision of humanity, Skolimowski focusses directly on those values that "touch our minds, our hearts, and our bones," such that (1) the ongoing preservation of the evolutionary process is not impeded; (2) life in all its manifestations is enhanced through the preservation of the ecosystem; (3) capacities such as consciousness, creativity, and compassion, which are now inherent in the "highest developed form of the evolved universe" (i.e., human beings) are enhanced; and (4) the vessel that houses those "most precious achievements of evolution" is preserved and enhanced (1981, pp. 77-78).

These aspects of Skolimowski's cosmological vision are contained within a "new imperative" that offers a rationale for viewing life in a hierarchical manner without allowing for domination and devastation. In times of conflict (which are inevitable), Skolimowski says it is only natural to value a human life more than that of a mosquito. The consciousness of humans being part of the same ecological habitat due to their location on the evolutionary totem pole, impels a notion of guardianship or stewardship in the human-nonhuman relationship: "We are the guardians and stewards, not just the 'users' of the eco-habitat in the same sense in which we are the guardians and stewards of human life and of our spiritual heritage" (p. 84). Natural hierarchy, simply characterized as human uniqueness and superiority over other forms of life, is not "our superiority" but rather "the superiority of nature, the superiority of life itself, which is capable of evolving selfconsciousness and capable of writing poetry — through us" (p. 106). Skolimowski

views the fulfilment of humanity's potential in transcending our present condition by ensuring our "immediate and long term biological and environmental survival" through a transformation of the world from within. "We shall survive because life will survive, because life is stronger and more enduring than any of its species" (p. 107).

These are the essential features of Skolimowski's ecological vision. The book offers much more depth and food for thought than it has been possible to outline here. Ecological humanism offers a comprehensive and coherent understanding of the nature of the universe that is required in formulating a vision for the future. Although it does not contain a concrete program of solutions (something Skolimowski never intended to do), it cuts to the heart of the contemporary crisis plaguing humanity, that is, it challenges the very foundations of contemporary thought and offers a philosophical framework upon which pragmatic solutions can be based.

Skolimowski's promotion of the unique spiritual essence of human existence and life itself sets it apart from the other approaches that are represented in Figure 1. Indeed, that feature of the philosophy presented a difficulty in its placement on the framework. It has been left in Figure 1, rather than being included in Figure 2 below, because of the apparently atheistic nature of the cosmology that is presented in the book. As has already been mentioned in Chapter 1, the foundation of the religious vision in this thesis is a belief in a conscious, omnipotent, transcendent, and creative force that is referred to as God in the Judeo-Christian tradition. Other concepts of spirituality are certainly valid and are necessary for those who espouse them. However, the source of that spirituality is a subject of debate that cannot be resolved through scientific methods. It is a matter of faith. In the long run, only history will be able to show if one all encompassing vision of spirituality offered the guidelines for a sustainable system of ethics and practical applications to ensure the perpetuation of life on this planet.

Despite that one point of distinction between my views and Skolimowski's concept of ecological humanism, the principles set out in his book will resurface again towards the

end of this chapter when the now obscured center of the framework in Figure 1 is revealed in those approaches that are explicitly and profoundly religious in their approach. There are, of course, some approaches that are significant in the absence of spirituality in their principles and which seem to err on the side of too much action and too little reflection on the motivations behind or the consequences of their action. As will be shown below, the more "shallow" forms of environmentalism are often strong on practical activities but weak on the theoretical foundations of those activities.

From Radical Biocentric Activism to Bioregionalism: Completing the Tour

Among the most widely known and visible environmental approaches are those practical or action-oriented activities that appear in contemporary Western society. All sectors of society are represented in these "categories," from individuals to national governments, from local producers to multinational corporations, from radical and militant activists to "eco-friendly" business and management consultants. On an individual level and in a few larger organizations, the underlying motivation for their activity may be based on one of the ethics discussed in the first part of this chapter. However, for the most part, these activities and strategies have a relatively weak theoretical foundation or adhere to or are an application of the dominating influences in Western society, especially those that drive the economy. Like their more reflective counterparts on the lower half of the framework, these approaches range from those oriented toward the improvement of human "civilization" at all costs to those that are strongly biocentric. The discussion begins with a general overview of the most extreme expression of biocentrism that does not ground itself in the holistic vision of deep ecology, that is, animal rights activism.

Animal Rights Activism

The animal rights movement is usually associated with protests and lobbies to ban the use of animal furs and other products for human use. However, it is also represented at an

institutional level by the hundreds of branches of the Humane Society, Societies for the Prevention of Cruelty to Animals, and various organizations that promote a ban on the use of animals in scientific testing. Despite the negative image projected by some of the more militant expressions of the movement,⁷⁶ many of these organizations have played a crucial role in raising public awareness regarding the cruel treatment toward animals of which human beings are capable. Heightened awareness at the societal level has tightened the legislation and enforcement of laws protecting animals from inhumane treatment. Commercial boycotts on cosmetic companies that use animals in their research have transformed the industry, creating a growing market for companies that do not use animals in product testing.⁷⁷ The section below on "green" consumerism and marketing will discuss how companies are taking advantage of the opportunities provided by more environmentally conscious purchasing habits by North American consumers.

There is a much "deeper," more reflective side to some advocates of animal rights.⁷⁸ The earlier mention of utilitarianism referred to this very vocal and visible branch of environmental ethics. Although not all animal rights activists would describe themselves as utilitarian in their approach, the eloquence and high public profile of such advocates as Peter Singer paint some expressions of this branch of environmental ethics with a utilitarian colour. The application of utilitarian ethics to nonhuman species dates back to one of the early progenitors of utilitarianism, Jeremy Bentham (1748-1832), who asserted that moral considerability must be accorded on the basis of a creature's capacity

76. In some of the more violent demonstrations in North American cities, passers by wearing fur coats have been physically assaulted by protesters.

77. One of the most well-known success stories is The Body Shop, a now international company with hundreds of stores that started out with one outlet in England 13 years ago. The company actively promotes the preservation of biodiversity and the habitats in which endangered species live, takes part in environmental education programs to heighten public awareness of the complex issues in contemporary society, sponsors cultural preservation and diversity presentations and organizations, and channels a large percentage of its profits back into research into more environmentally benign production activities. The success of The Body Shop is probably most visible in the number of "copycats" that have flooded the market in recent years, trying to capture a share in this "growth" industry.

78. The following discussion will center primarily around the issues raised by two rather vocal environmental philosophers. Animal rights issues are discussed by others in works that are less polemical. See, for example, Birch and Cobb, 1981, pp. 153-62.

for suffering, thus including animals with humans in those activities designed to promote the common good (Johnson, 1984, p. 340).

Singer has continued the utilitarian tradition and has made famous the awkward term "speciesism." For those who object to using the term on stylistic grounds, Singer suggests "human chauvinism" or "species chauvinism" as substitutes (1980, p. 256, n. 27). The concept, based on prejudice such as racism or sexism and applied to nonhuman sentient species, derives from Singer's critique of human beings using animals for trivial, frivolous, or unreasoned purposes. He allows for justified uses such as medical research as long as the animals are treated humanely. Singer uses the criterion of sentience for his brand of utilitarianism, including all sentient creatures in a category based on inherent value. His preservation ethic includes nonsentient creatures but only in terms of their instrumental value. Although Singer avoids anthropocentrism and *radical* biocentrism, his establishment of a hierarchy based on intrinsic and instrumental value allows for justified extermination of some species or individuals (1980). He also offers a rational argument in favour of vegetarianism, asserting both economic (production of grains and vegetable proteins is far more "efficient" than raising animals for human consumption) and emotional or aesthetic (the knowledge that when one eats meat, one is eating the flesh of a formerly conscious creature that interacted with other creatures) reasons for eliminating meat from human diets (1980, pp. 252–53). Singer's hierarchy of value seems to ignore the dynamic, organic interdependence and interconnectedness that characterize nature. It also fails to protect those human beings who may, through no fault of their own, be unable to show the qualities of sentience that Singer's hierarchy requires for their protection. An ethic based on human beings *awarding* rights to life based on some humanly constructed concept is contrary to the organic spirituality inherent in all life and places human beings in the unacceptable position of playing god.

Another well-known advocate of animal liberation, Tom Regan, differs from Singer in the theoretical foundations for the practical applications of his notion of animal rights.

Regan rejects utilitarianism for its lack of depth and calls for rights to be accorded on the basis of inherent value. Regan's view is that animals are entitled to the respect that humans receive because they have life and therefore have value apart from anyone or anything else. Rights are accorded to individuals rather than to a species and no species collectively has more inherent rights than another either because it has a larger or smaller population or for any reason based on sentience. Thus, this rights based view does not offer a foundation for the preservation of species or the promotion of biodiversity. In this view, since rare species have fewer numbers, their overall impact on the entire biosphere is perceived to be less important than more common species and therefore, if a choice needed to be made between protecting the last two individuals of a species or a herd of cattle that was needed to ensure the survival of that genetic pool, the cattle would be saved. This application of the rights approach is further complicated by the fact that it does not allow for the sacrifice of some animals in order to protect a net benefit overall (Gunn, 1984, p. 329). The application of logic to this kind of reasoning results in a confusing interplay of conflicting values. Another difficulty with the rights-based ethic is that competition is a *natural* part of the survival of species:

Individual plants compete for space and light; animals compete for habitat and food; animals kill plants and carnivores kill other animals. Life is robbery. Far more animals are born than can reach maturity. The ecosystem works well for species, but the sacrifice of individuals is enormous. (Cobb, 1988, p. 110)

This "sacrifice of individuals" is a completely natural phenomenon, the disruption of which by humans can have devastating impacts on ecosystem integrity. The protection of animals on the basis of individual rights is, therefore, inadequate as the foundation of an environmental ethic. This conclusion is further reinforced by the fact that neither the utilitarian approach as it is advocated by Singer nor the rights approach promoted by Regan offers protection for nonsentient species or individuals. Despite specific aspects of these ethics that may offer insight into means by which certain elements in creation might

be preserved, as a whole they fail to provide a mechanism for ensuring that the ecosystems in which all beings live are sustained.

Not all animal rights activists are as overtly philosophical in their deliberations as Singer and Regan. Indeed, some biocentrists are more radical in their conceptions of natural hierarchy or lack of it, committing the human=dog=carrot fallacy. All animal rights activists, regardless of their stripe, seem to ignore the inherent *ethnocentrism* in their views. It would be interesting to determine if the animal rights movement as we know it is active anywhere outside contemporary Western society. One would suspect not. For centuries, the indigenous people^s of the world, especially the Inuit, have had an entirely different cosmology from that of the West, basing their survival on the consumption of meat and the use of animal parts. Animal rights activism is conceptually incomplete and, although included on the map, like other movements or activities that occupy the periphery, it fails to offer sufficient grounds for formulating a unifying sustainable environmental ethic. It does, however, like deep ecology, reveal many of the injustices inherent in human attitudes toward nonhuman nature.

Reform Environmentalism: Triage or Trying to Avoid the Inevitable?

Citizens of the West have gradually become more aware of environmental problems over the last few decades. The increase in popular awareness of issues such as air and water pollution and other effects of chemical pesticides can probably be traced to the publication in 1963 of Rachel Carson's *Silent Spring*. The next significant events occurred in the early 1970s with the first Earth Day on April 22, 1970, the 1972 Stockholm Conference on the Human Environment, the publication of the Club of Rome's *The Limits to Growth* (1972), and the establishment of federal environmental departments by the Canadian and United States governments in the early 1970s. The response to increased awareness of the numerous problems associated with industrial society has been a dual thrust from governments and activist organizations such as Friends of the Earth and Greenpeace. For

the most part, economic and political systems have lagged behind the environmental movement in their willingness to transform society to deal with the *root* causes of the crisis. It is only now, more than 30 years after Carson's plea for sanity, that significant changes can be perceived. However, deeper analysis of the transformation reveals that the changes are relatively superficial. Despite the numerous mechanisms and policy shifts that have taken place, the underlying flaws in the foundation of the Western political and economic system have not been addressed in any substantive way.

On an individual level, there are glimmers of hope. The 1992 publication by then U.S. Senator, now Vice-President Al Gore of *Earth in the Balance: Ecology and the Human Spirit* and its subsequent rise to the top of the best-seller lists is a testimony to one politician's attempt to apply a deep-rooted passion for the earth by working within the establishment to address the environmental crisis. However, Gore's relative silence on some policies that have been initiated by the Clinton administration reveals how difficult it is for one person, even the Vice-President of the United States, to effect the changes necessary to deal with society's crises. The timing of the election of the Clinton team in the midst of a global recession may have a great deal to do with their inability or unwillingness to make radical changes in American environmental policy. When the public is faced with decisions that are framed within a context of economic vs environmental health, most of them will choose to ensure their economic well being before they will do what is necessary to protect the environment.

Environmentalism has arisen against this social background over the last 25 to 30 years. Environmental victories have occurred during that time and even small achievements are progress. However, it is absolutely crucial that minor victories not blind the public to the reality of the underlying problems that need to be addressed.

Shallow or reform environmentalism has made a significant contribution to the environmental movement by encouraging individual citizens to become more aware of and involved in the protection of the environmental resources in their own front and

backyards. Thousands of practical programs have been implemented throughout Western (primarily urban) society to deal with such problems as overflowing landfills and disposal of hazardous waste. Municipal "blue box" programs that enable households and institutions to recycle glass, plastic, newspaper, and tin cans contribute significantly to the reduction in the amount of material being sent to landfills. Composting programs provide the incentive for urban dwellers to engage in an activity that rural gardeners have practiced for decades. Community-sponsored depots for the collection of toxic chemicals such as old paint cans, batteries, and other hazardous materials not only divert these substances away from landfills to be handled more safely but also educate the public on the toxic effects of household products that most consumers take for granted. The ubiquitous skull and crossbones symbol identifies those substances that are dangerous to human health and are now increasingly perceived as dangerous to environmental health as well. The elimination of certain toxic chemicals from typical household items such as laundry detergents is also a reflection of heightened public awareness of the hidden environmental costs of modern consumption habits. The increased use of recycled paper products and the heightened understanding of the distinction between post-consumer and post-production recycled fiber are other indications of a change in attitude.

These examples are only a small portion of the hundreds of initiatives and innovations that have taken place in Western society over the last few decades as public behaviour begins to reflect its heightened awareness of the effects of industrialization. The monumental effort that has been made to educate the public on the "four Rs" (reduce, reuse, repair, recycle) has certainly not been wasted and the new generation of citizens is testimony to the success of the endeavour as children remind forgetful parents of the importance of such effortless tasks as separating their garbage, a practice unheard of in most North American households thirty years ago.

However, we must not allow these "band-aid" efforts to lull us into a false sense of security. "We have diverted ourselves with litterbug campaigns and greenbelts in the

name of esthetics while the fabric of our very environment is unravelling" (Shepard, 1967, p. 4). Public attention has indeed been diverted as a result of the massive extent of reform environmentalism and its various manifestations. People are increasingly aware of *what* they are supposed to do to be "environmentally friendly" but many have no idea *why*. They use their blue box because it is convenient. They compost because they are told that it is good for the garden. But to what extent are average North American citizens aware of the connections between their lifestyle and the natural environment? How aware are they of the connections between their household purchases and the lives of people in so-called Third World countries, or indeed, less privileged people in their own country? How deeply do North American citizens investigate the impact that their own lives have on those of the other creatures, human and otherwise, with whom they share the planet?

"Green" Marketing and Consumerism

One of the most significant offshoots of reform environmentalism is the burgeoning field of "green" economics. Advertising executives and financial experts jumped on the environmental bandwagon when it emerged in full force in the early 1980s. Since that time, "green" marketing has become big business. What once were small-scale, independent ventures catering to the "radical fringe" in the form of health food stores, food cooperatives, alternative health services, etc., have become thriving contributors to the mainstream economy. Companies such as The Body Shop have succeeded internationally, catering to a growing mass of consumers seeking "environmentally friendly" alternatives to the old standards. The success of these ventures has caused the older companies to analyze their own production and marketing methods to tap into this new market. Certain corporations have, to their dismay, learned that what goes on behind closed doors does not always escape the scrutiny of the public, and inhumane or environmentally destructive activities have led to uncomfortable squirmings in boardrooms and, in some cases, heavy fines and jail terms.

Many consumers are more conscientious in their buying habits, examining labels to find out where and how products are made and what is in them. Publications have appeared on the market to assist consumers in supporting those companies that offer products made and tested under more "acceptable" conditions and to steer them away from those that do not. Governments have initiated labelling programs, such as Canada's own "enviro-choice" logo, that identify those products that meet certain criteria. Various forms of media offer "watchdog" programs that analyze and investigate products and companies, sharing the good and bad news with their viewers, listeners, and readers. Mainstream magazines now offer columns and articles on topical environmental issues and magazines devoted exclusively to environmental issues have appeared on the market by the dozens in the last ten to twenty years. All these ventures tap into the increased public awareness of and thirst for information on issues related to the environment.

Like the various "band-aid" efforts that characterize reform environmentalism, green marketing is often merely a superficial response to the crisis, rather than an attempt to address the underlying causes. In many cases, marketing strategies are blatant exploitation of the changed market sensibilities to increase profits. In others, there is a massive public advertizing campaign around one specific "environmentally friendly" product to mask or to divert attention away from less benign activities within the same company elsewhere. Some multi-national companies have moved entire operations overseas to avoid tightened environmental regulations in North America. For the most part, however, government and business are doing whatever is necessary to maintain their respective images of looking after the people's best interests.⁷⁹

⁷⁹ For analyses of and alternatives to current economic practices, see Henderson, 1978; Dähl, 1984; Berry, 1988; Daly and Cobb, 1989; Brown et al., 1991; Huddleston, 1991; Jacobs, 1991; MacNeill, et al., 1991; and Rifkin, 1991. Berry, for example, suggests that economics be looked at as a religious issue, incorporating the "earth deficit" into economic calculations. In his view, the earth deficit "is not only a resource deficit, but the death of a living process, not simply the death of a living process, but of *the* living process, . . . which exists, so far as we know, only on the planet earth" (1988, p. 72).

At the consumer end, the environmental movement and the "greening" of business have increased the range of products offered to those seeking alternatives. For necessities such as food, basic clothing, and health-related products, this new market is a much-needed addition. The wider availability of these and other products, however, perpetuates the consumptive habits of much of North American society by providing people with opportunities to continue to buy things they may not need.

Despite the numerous benefits that have arisen from the various applications of environmentalism from within the prevailing social, political, and economic order (or perhaps more accurately, disorder), the mystification that has occurred as a result of the ubiquitous nature of such efforts has weakened public perception of the acuteness of the crisis at a much more fundamental level. Treating the symptoms of the crisis with such superficial measures and expecting a cure is like treating a compound fracture using a toothpick as a splint. Unless we address the underlying and most acute nature of the problem, it will not heal. What is required is a double-barreled approach of practical measures based on a theoretical framework that deals with all the manifestations and causes of the crisis. The problem is deeply rooted and, therefore, the solutions must penetrate beyond the surface of contemporary lifestyles. As will be seen in the next section, some people are making some of the deep transformations in their personal lives that are necessary at the societal scale by following an ethic that has significant potential.

Bioregionalism: "Living-in-Place"

This discussion of the top half of the map concludes with a return to the horizontal axis and an approach that is beginning to receive more attention in fields such as environmental ethics, geography, and other disciplines that contribute to research in environmental studies. Bioregionalism first emerged in the mid 1970s primarily through the work of Peter Berg and the Planet Drum Foundation in San Francisco and gradually developed throughout the 1980s until the publication by the Sierra Club of Kirkpatrick

Sale's *Dwellers in the Land* in 1985.⁸⁰ The movement is characterized in fiction by Ernest Callenbach's popular novel *Ecotopia*, in which people living in the geographical area now comprising Washington state, Oregon, and northern California decide to separate from the rest of the country to form their own autonomous community. The location of bioregionalism on the map in Figure 1 is problematic due to the fact that there is yet incomplete consensus on its mandate. There is an unresolved debate regarding the depth of its scientific versus its philosophical foundations. Therefore, its location on the map is tentative and reflects its potential as its proponents continue to chart its course.⁸¹

Of the philosophical approaches discussed thus far, bioregionalism is the most sensitive to and reflective of geographical considerations and, for that reason alone, given the current climate of renewed awareness of the relevance of geography to the debate, it deserves greater attention, especially by geographers. Sale defines a bioregion as "a life-territory, a place defined by its lifeforms, its topography and its biota, rather than by human dictates; a region governed by nature, not legislature" (1985, p. 43). Berg defines a bioregion as a "geographical province of marked ecological and often cultural unity, its subdivisions, at least ideally, often delimited by watersheds . . . of major streams" (quoted in Parsons, 1985, p. 1). There are a number of conceptual problems with some of the language used in these definitions which some scholars find problematic, as will be seen below. One of the central concepts of bioregionalism is "living in-place," that is, "following the necessities and pleasures of life as they are uniquely presented by a particular site, and evolving ways to ensure long-term occupancy of that site" (Berg and

80. Parsons (1985, p. 4) and Devall (1988, p. 58) refer to Canadian poet and biogeographer Allen Van Newkirk, who proposed a study of so-called "bioregions" in Nova Scotia in 1974, seeking a link between the study of cultural and biotic regions. Apparently, his study never got beyond the proposal stage.

81. Geographer James Parsons places it "somewhere between the reformist 'shallow ecology' of the conventional environmentalists and the long-range 'deep ecology' movement . . ." (1985, p. 5). If my spatial representation of environmental philosophy was represented by only that continuum, I would have no difficulty agreeing with Parsons' analysis. However, I must also consider each philosophy in terms of the orientation of its "centrism" or the nature of its priorities regarding inherent value. As will be seen in the following discussion, bioregionalism seems to be promoting itself as somewhere between ecocentrism and biocentrism; however, in reality (i.e., in the practices of its adherents), it manifests itself as being more anthropocentric than biocentric.

Raymond Dasmann quoted in Alexander, 1990, p. 162). This living in place is also expressed as a concept called "reinhabitation" or "developing a bioregional identity":

It means learning to live-in-place in an area that has been disrupted and injured through past exploitation. It involves becoming native to a place through becoming aware of the particular ecologic relationships that operate within it. . . . It involves applying for membership in a biotic community and ceasing to be its exploiter. (Berg and Dasmann quoted in Parsons, 1985, p. 3)

There are three central tenets of bioregionalism: (1) belief in the existence of natural regions; (2) advocacy of a practical land ethic; and (3) promotion of regional and local cultures to protect against "global monoculture" (Alexander, 1990, p. 163; Parsons, 1985, p. 3). The interpretation and application of these tenets create difficulties in the mandate and understanding of bioregionalism. One interpretation is to perceive the bioregional approach as normative, as a framework for ethical principles regarding human-land relationships. One scholar has described bioregionalism as the regional fulfillment of Aldo Leopold's land ethic (Alexander, 1990).

Cheney also perceives the links between bioregionalism and the land ethic, viewing *A Sand County Almanac* more as a reflection of Leopold's perceptions of the landscape and the narrative derived from them than as the foundation for a universal environmental ethic (1989). He develops many of the themes pursued by geographers like John Kirtland Wright, Yi-Fu Tuan, Donald Meinig, and contributors to *Landscape* magazine in an article that views narrative grounded in geography as the key to discovering the nature of relations between humans and their environment:

Our position, our *location*, is understood in the elaboration of relations in a nonessentializing narrative achieved through a grounding in the geography of our lives. Self and geography are bound together in a narrative which locates us in the moral space of defining relations. . . . *Mindscapes* are as multiple as the *landscapes* which ground them. (Cheney, 1989, p. 126)

The other approach that can be taken in applying bioregionalism is more overtly scientific. The focus is on small regions that are determined by physical factors such as topography and watershed features rather than political divisions and boundaries. The

difficulty posed by this application of a "small-is-beautiful" approach is that some bioregions defined by such physical features occupy huge land areas and are inhabited by millions of people who, in the case of the Great Lakes Basin, are citizens of two countries who may feel more allegiance to or derive their sense of identity from cultural factors that transcend the physical limits of their bioregion (Alexander, 1990, p. 165). As a science, therefore, bioregionalism seems to suffer from environmental reductionism and to ignore the humanistic elements that are essential to complete studies in the social sciences today.

Some proponents of bioregionalism have also been criticized for their apparent deification of the "laws of nature." This critique has been directed primarily at Sale's attempts to discover in nature "infallible first principles" upon which human institutions must be built if they are to prevail. Sale promotes a "bioregional paradigm" as the only suitable approach for defining geographical areas based on central principles or key concepts, which Sale identifies as region, community, conservation, stability, self-sufficiency, cooperation, decentralization, complementarity, diversity, symbiosis, evolution, and division (Sale, 1985, p. 50; Alexander, 1990, p. 164). Although Sale spends most of his book examining these concepts in a format organized around what he calls "the four basic determinants of any organized civilization: scale, economy, polity, and society" (1985, p. 51), in my opinion, there are many hermeneutical difficulties posed by the determination of these principles that require more analysis than provided so far by advocates of bioregionalism.⁸² Alexander's distinction between values and laws—accepting Sale's principles as values but rejecting them as laws—is an important one in this discussion (1990). Proponents of bioregionalism run the risk of making normative judgements on the basis of incomplete empirical data if they assert any one of these concepts as a natural (i.e., "infallible") law simply by analyzing the "natural" landscape.

⁸² The scientific foundation for Sale's work is James Lovelock's Gaia hypothesis described earlier. As Sale admits, the hypothesis is as yet insufficiently tested and not proven "scientifically." It might, therefore, be more constructive to view, and for its proponents to promote, bioregionalism as a normative rather than scientific movement. Such a commitment to one side of, rather than sitting on, the fence might resolve some of the difficulties that have been exposed and examined in recent critiques.

Another difficulty with the generalization regarding the small-is beautiful principle is that not all small communities manifest the so-called "natural" qualities of intrinsic ecological sensitivity that Sale believes can be "grasped" from the "laws of nature" when the scale of human activity is small. Alexander cites evidence of those small communities that have not necessarily been unconsciously wise, internally harmonious, and ecologically benevolent (1990, p. 166).

Nash criticizes bioregionalism for its promotion of withdrawal from mainstream society, thus failing to participate in the active transformation of societal institutions and systems that have led to the problems that face humanity today (1989, p. 209). Physical removal of oneself from the unpleasant aspects of contemporary Western existence may be an attractive solution for some and, indeed, has been adopted by hundreds of individuals frustrated with the status quo. However, such passive detachment (as opposed to active engagement) can be perceived as selfish when only a massive transformation in society as a whole will address the root causes of the crisis.

Other difficulties with bioregionalism stem from Sale's definition expressed at the outset, especially in terms of nature "governing" a region. This notion of governance reveals an attachment to environmental determinism, a concept regarding the nature-human relationship that fails to explain how humans determine their interactions with each other and acquire values regarding that behaviour. As mentioned briefly in the last chapter, geographers in the early part of this century dabbled in environmental determinism as a response to Darwinian theory, eventually rejecting the notion as failing to incorporate human beings adequately into the equation.⁸³ It is somewhat atavistic at this point for contemporary social scientists to reassert such a formula. Rather than viewing nature as a governing actor, it is more accurately perceived as a definer of opportunities for and constraints on human activity. Alexander shares my concerns

83. As environmental historian Donald Worster points out, "it has preeminently been geographers who have helped us all see that our situation is no longer one of being shaped by environment, rather, it is increasingly we [who] are doing the shaping, and often disastrously so" (1988, p. 306).

regarding an overly deterministic attitude: "Nature sets limits, but it does not dictate how we should treat one another, nor the kind of polity we should adopt" (1990, p. 169).

Promoters of bioregionalism need to get past the notion of a natural area being a teacher, consciously offering an instructive voice to humanity. In some cases, these scholars seem to be somewhat anthropomorphic, investing in nature certain human intellectual or mystical powers. In this respect, they draw on North American Native cosmology, a system of beliefs that will be discussed in a generalized fashion later in this chapter. Cheney, for example, views the bioregion as the ideal locus for myths and narratives that instruct humans in healthy ways of living: "What is desired is a complex system of images or myths of the human-land community which *instructs* and does so in a way that is felt to be both obligatory and fostering of individual and community health" (1980, p. 131). This conceptualization of a "naturally" derived system of ethics seems to reject the role of spiritual influences that arise from within the human psyche or soul and eliminates religion as a valid cohesive force in society. Cheney's interpretation of the bioregional approach is an explicit attempt to integrate the concepts explored in this particular environmental ethic with some of the notions driving post-modernism.

Rather than rejecting bioregionalism for its shortcomings, its strengths should be developed and its theoretical foundations refined so as to make it more relevant to contemporary applications in both science and philosophy. Parsons has described bioregionalism as representing "what might be termed an action-oriented cultural geography, partially disguised in a new vocabulary and bolstered by an intensely practical idealism. . . . Bioregionalism is a moral philosophy, . . . a framework for action that celebrates geographic and cultural diversity, the sacredness of the Earth, and the responsibilities of local communities to it" (1985, p. 4). Viewed in this way, it has great potential to provide a bridge between various fields of human enquiry as long as it does not exceed the bounds of what any scientific theory or metaphysical notion is capable of

achieving.⁸⁴ Instead of promoting bioregionalism as a framework for determining natural laws, it might be more useful to seek ways of applying the regional scale of enquiry that it advocates in transcending political boundaries that can inhibit ecologically sustainable behaviour. Rifkin (1991) sees bioregionalism as a means of integrating political and ecosystem boundaries at the local level, thus enabling a more global (biospheric) scale of politics to be applied. Merchant sees its potential in offering a "program of change toward a sustainable way of living" and emphasizes the goals it shares with indigenous peoples (1992, p. 222). Another view emphasizes the concept of bioregionalism in terms of choices rather than obligations:

Accepting the fact that "natural" regions have begun to give way in people's lives and consciousness to functional (i.e., cultural) regions, we should resolve to take advantage of whatever potential these hold for developing an attitude of ecological and social responsibility. At the same time, making use of concerns about environmental and quality of life issues, we can strive to cultivate bioregional consciousness—wherever possible bringing it into the cultural mainstream—such that the health of the "land community" becomes an ethical standard for human beings everywhere. (Alexander, 1990, pp. 172–73)

Avoiding the Fringes

The positions located above the horizontal axis are fairly action oriented, whereas those below the axis are more theoretical. The positions above the line represent policies or management plans initiated by governments, social groups, corporations, or individuals to deal with environmental issues. They tend, especially in those positions placed toward the outer edges of the map, to reflect self-directed interests without necessarily addressing the roots of environmental problems. Those located toward the top of the map tend to treat symptoms rather than causes. Toward the center of the map, one finds policies that are more holistic in their mandate, integrating and offering a more balanced framework of

⁸⁴ Christian theologian Thomas Berry endorses the bioregional vision in his popular book *The Dream of the Earth*, in which he presents several bioregional principles such as the perception of the earth as a direct source of knowledge, application of the Gaia hypothesis, and rejection of humanly constructed boundaries and territories. Deep ecologists also endorse bioregionalism. See Foreman in Bookchin and Foreman (1991, p. 74) and Devall (1988, pp. 57–72). Devall finds the work of phenomenological geographers enlightening in this discussion, referring to the works of Yi-Fu Tuan and David Seamon.

theory and practice. Below the horizontal axis, the positions range from purely abstract theories that offer little in the way of practical guidelines (located near the bottom of the map) to ideologies that offer comprehensive and critical examinations of the prevailing paradigm with sweeping recommendations for its transformation. Outside the borders of those positions discussed so far reside attitudes that I label the Fringes.

Eco fascism — promoting nature at the expense of human survival — is not explicitly espoused or practiced by any person or organization (although radical activist groups like Earth First! might come close), but rather, is a term used by Murray Bookchin in an attack on Garret Hardin's lifeboat ethic:

The most disquieting direction followed by many environmentalists has been in the direction of what I would bluntly call ecofascism . . . the message of the "lifeboat ethic" . . . To utilise ecological dislocations as a means for reverting to an "ethics" of crass egotism, to build a "strategy" of self sustenance on the myth of a stingy nature . . . , to elicit a meanness of spirit on the presumption of "scarcity" is an horrendous mockery of ethics, nature and even the traditional concept of scarcity as a stimulus to progress. (Bookchin, 1979, p. 22, quoted in Pepper, 1984, p. 205)

Bookchin views the lifeboat ethic as an "ideology of *self-interest*, and *self-preservation*," perpetuating the conflict between humanity and nature by pitting human against human, and ultimately leading to "repression and totalitarian control." Eco-fascism has also been used by some animal rights activists to describe deep ecologists (see Regan in Nash, 1989, p. 159). The conflict arises because of the holistic approach adopted by deep ecologists that fails to protect individual members of any given species, a philosophy that is intolerable to many animal rights activists who place the survival of individuals ahead of more abstract (to them) concerns. The placement of eco-fascism on the map is somewhat arbitrary since it is probably not *consciously* practiced by any individual or group. If the discrimination is derived solely from a perspective of preserving the biosphere, it belongs in the bottom right corner. However, since the attack has been directed primarily against extreme deep ecologists, it is located closer to their position.

Radical biotic egalitarianism is the term employed to describe the human=dog=carrot ethic, which not only denies the basic natural hierarchy that characterizes life but provides

no justification for the survival of any living thing since all organic life consumes at least one other element in creation to survive (Blackstone, 1980). Not even vegetarians would be exempt from criticism. The only natural elements that might be allowed to exist in a world driven by such an ethic would be the fundamentals upon which our planet is based: air, water, and minerals. Actually, radical biotic egalitarianism would not exist at all since there would not be anyone around to think of it!

At the opposite extreme from radical biotic egalitarianism is are various "isms" that allow humans to "justify" horrendous behaviour toward other humans. One hopes that these attitudes will one day be relegated to history books and will represent as implausible and impossible a reality as the two extremes already discussed. It is tragic that such is still not the case despite the cost of such behaviour. A brief statement should be made regarding the inclusion of egoism on the list, since, at first glance, it may not appear to be in the same league as the others. However, some believe that the other, more societal positions would not be possible if human beings were more selfless and less self-centered. Ervin Laszlo refers to chauvinism as "egoism writ large" (1989, p. 51).

At the top of the map, one finds the *laissez-penser/laissez faire* approach that characterizes much of Western society today. This attitude allows the system to function with little thought given to the consequences of relying on institutions and processes that were created when the world was considerably less complex and human communities less interdependent with each other. Like the "isms" referred to in the previous paragraph, the perils of this attitude are well documented. We witness every day the effects of a "market rules" attitude that infiltrates all levels of our consciousness and society, affecting our relations with everything, but especially other human beings and nonhuman life.

Rather than separating the intolerable positions from the inner areas of the map with a solid barrier, the separation has been identified with a dotted line. This permeable boundary reflects the fact that human beings still stray into those areas despite our best attempts to avoid them. This tragic aspect of the map represents a challenge rather than an

expression of despair. Perhaps someday, if the principles to be discussed in the next chapter become the norm, such attitudes will be distant memories, preserved in the literature but forgotten by the inhabitants of that future time.

Getting Centered

The preceding group of environmental philosophies is primarily secular in its approach. Although some expressions of ecofeminism and deep ecology promote and, in some cases, are based on, a profound sense of spirituality, they reject traditional approaches to religion and the concepts that have arisen throughout religious history. Their spirituality is derived from nature rather than from some animating or creative force that transcends nature. As mentioned earlier in this thesis, the purest foundations of the world's religions are not going to disappear. Religious values will endure because they are central to human consciousness regardless of one's concept of their source. Whether or not people believe "God" or "The Creator" exists as an essence outside of human consciousness is irrelevant. The existence of any transcendent or immanent Creator is independent of human belief or constructs. Empirical evidence does not even have to enter into the discussion but, when it does, the very existence of the universe could be considered sufficient "proof" of a creative force that surpasses human beings in imagination, power, and intelligence. Philosophers, theologians, and even scientists have devoted thousands of hours to the reflective and empirical exploration of the possibilities inherent in the question of the existence of a supreme, divine force in the universe.

Examining environmental ethics from an explicitly religious standpoint introduces what some scholars believe is missing from the moral arguments presented by conventional environmental philosophers. The usual domains of moral philosophy — rights, duties, obligations — are, in the rest of this chapter, set within a broader context of motivations derived from a set of worldviews or cosmologies.

The following discussion is based on this hypothesis: The development and environmental ethic toward which humanity is striving is based on an all-encompassing spirituality that includes a belief in the Creator as the source of all life and light, and the practical means by which the planet will be managed is based upon that ethic. On the map in Figure 1, this position occupies the center, where the x-axis and y-axis intersect, and exists as a central, radiating core in the third dimension possibly a z-axis (see Figure 2). This third dimension and the hypothesis that is based upon its integration with the x and y axes are not verifiable using conventional scientific methods and, to some, may represent a metaphysical "leap of faith." They may, however, be the first step in finding the "enlightened metaphysic" called for by William Blackstone fifteen years ago.

Figure 2. Diagram of Convergence of X, Y, and Z Axes

The discussion highlights several spiritual approaches to the environment, approaches whose history precedes the land ethic by decades and, in some cases, centuries.⁸⁵ They represent a portion of the spiritual foundation of a global sustainable environmental ethic, the formulation of which is the ultimate goal of this research. The discussion begins with the oldest of the traditions discussed in this chapter, North American Native spirituality.

Native Spirituality: Understanding Eloheh

God . . . commanded that the lands and fisheries should be common to all who lived upon them; that they were never to be marked off or divided, but that people should enjoy the fruits that God planted in the land, and the animals that lived upon it, and the fishes in the water. God said he was the father and the earth was the mother of mankind; that nature was the law. . . .

—Smohalla, Indian prophet

We should understand well that all things are the works of the Great Spirit. We should know that He is within all things: the trees, the grasses, the rivers, the mountains, and all the four-legged animals, and the winged peoples; and even more important, we should understand that He is also above all these things and peoples. When we do understand all this deeply in our hearts, then we will fear, and love, and know the Great Spirit, and then we will be and act and live as He intends.

—Black Elk

These passages are just a sample of many expressions of the North American Native attitude toward the earth and life, an ethic that transcends the bounds of conservation and preservation of the land and informs every aspect of life, human and nonhuman.

It is crucial to state at the outset of this discussion the impossibility of doing justice to the myriad Native traditions.⁸⁶ Each nation and tribe has its own particular and unique

⁸⁵ Noticeable in their absence are spiritual traditions derived from Eastern religions such as Buddhism, Taoism, and Islam. Constraints on time and space necessitated the exclusion from this discussion of many relevant cultural traditions. The major criterion for inclusion was the significant presence of the approach in the geographical region known as "the West" either in the past or currently. The Baha'i attitude toward nature concludes the chapter because it appears to offer an overarching theological and ideological context in which the other religious approaches can be included. For examinations of some of those religious traditions not included here, see Hargrove, ed., 1986; LaChapelle, 1988, and Regenstem, 1991.

⁸⁶ For an excellent treatment, see Hughes, 1983. For brief overviews of some of the major distinctions between Native and Western thought, see Callicott, 1982 and Booth and Jacobs, 1990. See also Berry, 1988.

characteristics. However, despite this diversity of expression, there are many common threads that run through Native culture. Inherent in all Native spirituality is a belief in an all-powerful creative force in the universe that is responsible for all life. Natives share a concept of a Creator who is inherent in everything and therefore is excluded from nothing; in which everything resides and therefore nothing is apart. *Manitou* (Iroquois for "One who makes everyone's breath"), *wakantanka* or *wakanda* (Lakota for "Great Spirit" or "Holy Mystery"), Earthmaker, and Creator are different names for what in the Judeo-Christian tradition is referred to as God. In some cases, *manitou* and *wakanda* appear in the same culture but represent different powers or spirits (Tooker, 1979). *Wakanda* is similar to the personified image of the Western God, whereas *manitou* is more like a life force. The concepts vary from tribe to tribe and research is confusing at a general level. To truly understand these concepts, one must move past the general level and investigate each Native group, a task far beyond the scope of this thesis.

One area in which there is some difference is in the extent to which tribes are biocentric or ecocentric. However, they do share a clear nonanthropocentrism as distinct from anti-anthropocentrism. Some cultures express an egalitarian view of creation that implies that all creatures are equal in terms of inherent value, that human beings have no more right to life than any other living thing. Others adopt a broader understanding of natural hierarchy, perceiving the importance of the predator-prey relationship and the carrying capacity of an ecosystem being dependent on a balanced representation of all the lifeforms indigenous to that particular area. In some cultures, humans are perceived as inferior to animals because of poorer instincts or inherent survival mechanisms. Humans are actually dependent on nature for their survival. "Man knew that he must never abuse [other life forms] by taking more than he needed for the present, not to insult them through ridicule or blasphemy, not torture them in any fashion" (Martin, 1978, p. 74).

The Native sense of spirituality is profoundly different from the Judeo-Christian hierarchy of religious authority. Native spirituality and the attendant view of nature

"comes from deeper inside the human psyche than mere rational thought or intellectual curiosity. . . ." Native religious practices are "conceived as a process, not of bending nature to human will, but of subordinating the human will to natural rhythms" (Hughes, 1983, p. 16). But the subordination does not imply that there is a power struggle or a loss of freedom in submitting to the natural forces. Human spirit is released through the surrender of the egotistical will or egocentric perspective to a comprehension of the oneness of all that there is. One's spirit is expanded through a feeling of connection with the life force of the universe.

One of the most profound distinctions between Native and Western approaches to nature is in relation to the concepts of land and ownership. The transcendent nature of the Native concept of the Creator prohibits the development of notions such as property, fenced-in territories, and ownership of parcels of land. For Natives, place possesses and radiates spirit. This worldview is in sharp contrast to the Western attachment to events rather than the places in which those events have occurred (Reed, 1986, pp. 28-29).

For Native Americans, nature is a reality rather than an abstraction, and residents and landforms are experienced as locuses of spirit beings whose collective and individual presence give meaning and sacredness to a person's perception of land. . . . It is the sense of place which defines a person's life. Native American cultures and histories are based in the land and their lives are inseparably intertwined with it. In a most real sense, it is their life. (Booth and Jacobs, 1990, p. 34)

This ethic of spiritual connectedness with the land manifests itself in the language of Native cultures, as certain modes of verbal expression reveal and eloquently provide insight into the fundamental and profound differences between Native and non-Native attitudes toward the earth. This difference in attitude is revealed over and over again when the Native and Western cultures come into conflict over the use of a particular geographical area. And yet, if non-Natives think deeply enough about their own personal feelings for a particular piece of land or area of the earth that has had a profound impact on them, the differences seem less important and the lessons to be learned from Natives

not so foreign to Western ears. The following example is drawn from the Tellico Dam congressional hearing in 1978. The speaker is Jimmie Durham, a western Cherokee:

Is there a human being who does not revere his homeland, even though he may not return? . . . In our own history, we teach that we were created there. . . . In the language of my people . . . there is a word for land: Eloheh. This same word also means history, culture and religion. We cannot separate our place on earth from our lives on earth nor from our vision nor our meaning as people. . . . So when we speak of land, we are not speaking of property, territory, or even a piece of ground upon which our houses sit and our crops are grown. We are speaking of something truly sacred. (Quoted in Booth and Jacobs, 1990, p. 35)

Many aspects of Native belief have been adopted by contemporary Western environmental philosophies. Ecofeminism and deep ecology have found inspiration in the nonhierarchical approach to life that is inherent in many Native cultures. Bioregionalism has drawn from the Native belief in nature as the great teacher, "the mirror that reflects all things" and the perception of place as a concrete awareness of and attachment to particular places, rather than place as an abstract concept (Booth and Jacobs, 1990, pp. 36 and 43).

One of the more important concepts inherent in Native spirituality is balance. This concept will be discussed in more detail in the next chapter, but for now, the Native attitude is shared. Essentially, the Native view of the world reflects an awareness of the intricate balance that is inherent within life and the importance of human beings recognizing it and striving to maintain and stay within it. The ethic is expressed in practical ways by Natives in the form of offerings made in exchange for the extraction or use of resources by human beings. The offerings are not sacrifices but rather are made to maintain the balance. Humans depend on other beings for life and these other beings depend on humans to maintain the proper balance (Hughes, 1983, p. 17; also Booth and Jacobs, 1990, p. 38). One poignant contrast between Western and Native ethics is in hunting. Natives view the practice as a profoundly spiritual experience, spending hours before going out, preparing themselves spiritually for the event as an attempt to attract the animal that is ready and willing to give its life for their survival. When they actually

embark on the hunt, they believe that this spiritual preparation eases the process and when they do sight an animal it makes the conscious choice to be taken. This willingness on the part of the animal is necessary to maintain the spiritual balance in the universe, a harmony that would be upset if the animal suffered or was destroyed without respect.⁸⁷

Another quality that will be discussed in the next chapter is moderation, which is also implicit in Native attitudes to the earth and their lives. Human beings are obligated to live simply and modestly so as not to impede the ability of the earth to sustain itself; to share with those in need; to walk the earth gently and reverently because they are part of it.

The burgeoning interest in Native culture and spirituality in recent years has awakened non-Natives to the potential of Native beliefs to offer insights into the formation of a sustainable ecological ethic. There is a massive body of knowledge at humanity's disposal if it is sought out in a respectful and careful manner. Piecemeal adoption of certain practices without an adequate understanding of the philosophical and spiritual foundation of such practices is exploitative and arrogant. If non-Native scholars wish to obtain the benefits of Native knowledge and wisdom, they must do so by learning Native ways in the Native fashion—patiently and respectfully. Scholars must also value their own spiritual traditions, avoiding an overly romantic perception of Native history or an image of Native culture based on stereotypes. This is why it is so important to explore each culture as a unique body of knowledge. Generalizations that are not explicitly acknowledged as such can lead to misinterpretation and misunderstanding.

Scholars who have been born and raised in the Judeo-Christian tradition have a significant resource base upon which to draw as well. As was demonstrated in Chapter 2, Western attitudes toward nature have largely been a product of religious and spiritually

⁸⁷ This ethic was expressed in a presentation by an Ojibwa couple at a Harmony Foundation seminar at Carleton University in August 1989. Although not strictly vegetarian, the couple does not consume meat that comes from commercial food production facilities, preferring to do without than support the suffering of animals. Their ethic views the consumption of meat from an animal that has suffered as intentionally bringing the suffering inside oneself. This perspective offers an ethic for non-vegetarians who feel uncomfortable about the way in which meat is processed in North America.

based ideas, emerging either out of organized religion itself, interpretations or misinterpretations of religious scripture, or spiritual insights gained from interactions with nature. The next section explores, again in a very general fashion, some of those ideas that have great potential to contribute in a significant way to the formation of a global sustainable environmental ethic.

Judeo-Christian Ecology and Ecological Theology

The discussion in this section draws primarily from Chapter 2 and, therefore, only those significant points that appeared earlier will be repeated. Interpretations and applications of biblical scripture have shaped in profound and, in some respects, devastating ways the development of Western society and ideology over time. There is a considerable body of scholarship that disputes the way in which the teachings of the Bible have been applied in society in general and toward nature in particular. Some of the contributors to the literature include Thomas Berry, Susan Power Bratton, John B. Cobb, Jr., Mary A. Dalton, David Ehrenfeld, Riane Eisler, Matthew Fox, Linda Graber, Elizabeth Dodson Gray, David Ray Griffin, Joanna Macy, Jay McDaniel, Carolyn Merchant, Reinhold Niebuhr, Theodore Roszak, Rosemary Radford Ruether, Paul Santmire, Henryk Skolimowski, Pierre Teilhard de Chardin, and Paul Tillich. These authors have published many articles and books sharing insights from uniquely individual and from three major perspectives—feminist, liberation, and process theology—into human nature, the nature of creation, and how they affect each other. Some bring an explicitly Christian or Jewish perspective to their work, offering their co-religionists an ecological perspective and others a Christian or Jewish approach to the environmental crisis. Others do not explicitly espouse either religion, presenting an ecologically or spiritually humanistic vision or perspective that draws from or is based on religious *values*. These scholars offer writings that are, for the most part, free of institutional dogma and rhetoric, building on a tradition started by natural theologians in the 18th century.

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Among the most prolific in their literary output are a group of philosophers and theologians who draw from the early 20th century work of Alfred North Whitehead. David Ray Griffin, John B. Cobb, Jr., and Cobb's former student Jay McDaniel have drawn from Whitehead's conception of "process philosophy" and developed "process theology," an attempt to reconceptualize Christianity in a more ecological fashion. This ecological model focusses on the individual-in-community, a concept expressed earlier by J. Baird Callicott. The model proposed in process theology views the individual as interconnected with the rest of the world. Similar to the Native view in which the Creator is manifested within each creature and each creature is part of the Creator, in process theology, the world is part of each individual just as each individual is part of the world: "Each actuality is a self that enfolds the entire universe into its own nature. This does not mean that actualities are interchangeable. Each actuality enfolds the universe from a particular point of view that is unique to itself" (McDaniel, 1986a, p. 207). This interconnectedness means that each living thing is affected by and affects everything around it:

The ecological model holds that living things behave as they do only in interaction with the other things which constitute their environments. It does not deny, of course, that many features of our behaviour are determined by structures of the organism itself or that much has been learned when this structure has been examined by scientists with the mechanistic model in mind. But the ecological model proposes that on closer examination the constituent elements of the structure at each level operate in patterns of interconnectedness which are not mechanical. Each element behaves as it does because of the relations it has to other elements in the whole, and these relations are not well understood in terms of the laws of mechanics. (Birch and Cobb, 1981, p. 83)

In this passage, Birch and Cobb set the ecological perspective apart from the mechanistic model that was developed in the 17th century. McDaniel develops the ecological model in contrast to what he calls the "substantialist" perspective in which the self, the world, and God are perceived as individual, detached "substances" that exist independently of one another. By offering this holistic counterpoint to the prevailing worldview, process theologians echo many of the concepts inherent in deep ecology and Native spirituality. The inclusive concept of self-in-community also finds common ground with the feminist and liberation critiques of the self-other dichotomy between men

and women, humans and nature, First World and Third World, East and West, etc. The ecological perspective also integrates the intrinsic vs instrumental debate in environmental ethics by according each individual both intrinsic value and instrumental value.⁸⁸

As mentioned above, the Judeo-Christian tradition is not entirely devoid of positive inspiration from its history, despite the efforts of contemporary scholars to reconceptualize its vision. The ethics employed by St. Francis and St. Benedict as outlined in Chapter 2 draw directly from the Bible. Several recent works document numerous sections of the Bible that endorse conservation of the earth's resources and kindness towards animals (see relevant articles in Hargrove, ed., 1986 and Regenstein, 1991). Other figures in history such as mystic Hildegard von Bingen (1098–1179) have been studied as exemplars of an "ecological" Christian attitude devoid of the hierarchical domination that institutional forms of the religion took on over the centuries.⁸⁹

For those who seek ecological inspiration within the Judeo-Christian tradition, there is a substantial body of material to investigate. One can go back to the original source, the Bible itself. Or one can explore the writings of those contemporary theologians who are seeking to find modern (or post-modern) ways of articulating or adapting biblical teachings and integrating them with sub-dominant views in history, compatible secular perspectives such as romanticism, certain elements in Eastern cosmology, and alternatives to the status quo such as feminist, liberation, and indigenous perspectives. The result could be a more balanced, just, and relevant ethic that offers powerful religious images and concepts to deal with contemporary problems.

A Christian spirituality that sees nature in God will attempt to feel nonhuman organisms as God feels them, that is, with openness to what they are in and for themselves, and with love. It will recognize that nonhuman organisms are parts of the divine body, and it will recognize that humans, too, are parts of that body. Such recognition will not preclude

⁸⁸. For more discussion of ecological process theology, see Birch and Cobb, 1981; McDaniel, 1986a and 1986b; relevant articles in two anthologies edited by David Ray Griffin, 1988a and 1988b; and Merchant, 1992, pp. 126–29.

⁸⁹. See the work of Matthew Fox for an examination of how some of these figures have relevance for what Fox calls "ecological creation spirituality." See Merchant, 1992, pp. 124–26 for a brief overview.

an awareness of the instrumental value various parts can have for one another. It will not preclude a *use* of the land, of animals in certain ways, and of plants in others. Indeed, it will not preclude a use of other people. But such use will not be wanton, and it will be complemented whenever circumstances allow by a willingness to let things be, to allow them to flourish in their own right. (McDaniel, 1986b, p. 46)

This strategy on the part of humans to feel for nonhuman creation as God does, "with love," represents one of the most profound aspects of the final offering in this chapter, the Bahá'í approach to nature.

Reconciling Evolution and Creationism: The Bahá'í Vision

... whatever I behold I readily discover that it maketh Thee known unto me, and it remindeth me of Thy signs, and of Thy tokens, and of Thy testimonies. By Thy glory! Every time I lift up mine eyes unto Thy heaven, I call to mind Thy highness and Thy loftiness, and Thine incomparable glory and greatness; and every time I turn my gaze to Thine earth, I am made to recognize the evidences of Thy power and the tokens of Thy bounty. And when I behold the sea, I find that it speaketh to me of Thy majesty, and of the potency of Thy might, and of Thy sovereignty and Thy grandeur. And at whatever time I contemplate the mountains, I am led to discover the ensigns of Thy victory and the standards of Thine omnipotence.

- Bahá'u'llah

This expression of divine worship from the Bahá'í writings reveals one of the fundamental concepts in this newest of the world's universal religions. For Bahá'ís, the existence of the universe and the diversity and majesty of nature are proof of the existence of an omnipotent Creator who is the source of all that has ever been and will ever be. In fact, the very existence of the human being is seen as proof of the existence of a supreme being and of a natural order in "the kingdoms of existence." 'Abdu'l-Bahá offers an analogy for the proof of the existence of God. After reflecting on the woman taking notes beside him at a talk in Chicago in 1912, and remarking on the fact that the words on the page, not having written themselves, prove the existence of the writer, 'Abdu'l-Bahá considers the universe:

Is it possible that it could have been created without a Creator? Or that the Creator and cause of this infinite congeries of worlds should be without intelligence? Is the idea tenable that the Creator has no comprehension of what is manifested in creation? Man,

the creature, has volition and certain virtues. Is it possible that his Creator is deprived of these? . . . It is perfectly evident that man did not create himself and that he cannot do so. How could man of his own weakness create such a mighty being? Therefore, the Creator of man must be more perfect and powerful than man. (1982, p. 82)

This passage may imply that the Bahá'í view embraces a creationist conception of nature rather than the evolutionary model accepted by science. Actually, the Bahá'í Faith *reconciles* the historical conflict between science and religion on this point. Accepting the scientific foundations for the vision of evolution as a fundamental process in the universe, the Bahá'í perspective distinguishes between the potential inherent in all life forms that is determined by the laws of creation and the process by which that potential is manifested (Dahl, 1990, p. 6). Each species, including human beings, has always possessed the potential to reach its current form, evolving, adapting, and becoming more complex as it reflected changes in the environment as part of a natural process that began millions of years ago. Therefore, human beings have always been human and never anything but human. In the following passage, 'Abdu'l-Bahá explains how the Bahá'í view is distinguished from and reconciles the conflict between evolution and creation:

. . . man, in the beginning of his existence and in the womb of the earth, like the embryo in the womb of the mother, gradually grew and developed, and passed from one form to another, from one shape to another, until he appeared with this beauty and perfection, this force and this power. . . . There is no doubt that the human embryo did not at once appear in this form. . . . Gradually it passed through various conditions and different shapes, until it attained this form and beauty. . . .

. . . from the beginning of man's existence he is a distinct species. . . . [E]ven when in the womb of the mother and . . . entirely different from his present form and figure, he is the embryo of the superior species, and not of the animal; his species and essence undergo no change. (1981, pp. 183-84)

The distinction of the human species from animals solves the problem of the "missing link," which, according to the Bahá'í view, does not exist. Attachment to the anatomical similarities between humans and apes and the human-like behaviour of other primates has blinded science to those essential aspects of the human being that distinguish it from animals. However, this distinction does not remove human beings from the natural system. Humans possess all the characteristics contained in the rest of creation; they are simply endowed with certain capacities beyond other creatures.

The distinctions between humans and animals are among those that are manifested throughout all the "kingdoms of existence" or creation. These "kingdoms" are classified as mineral, vegetable, animal, and human. Bahá'ís distinguish between the material and spiritual planes of existence, acknowledging the elemental connections that link everything on the material plane, that is, the world of physical creation, and emphasizing how the different "kingdoms" are distinguished from each other:

When we look upon the world of existence, we realize that all material things have a common bond; and yet, on the other hand, there are certain points of distinction between them. For instance, all earthly objects have common bodily ties. The minerals, vegetables and animals have elemental bodies in common with each other. Likewise, they have a place in the order of creation. . . .

. . . The mineral kingdom is possessed of a certain virtue which we term cohesion. The vegetable kingdom possesses cohesive properties plus the power of growth, or augmentative power. The animal kingdom is possessed of the virtues of the mineral and vegetable plus the powers of the senses. But the animal, although gifted with sensibilities, is . . . absolutely out of touch with the world of consciousness and spirit. The animal possesses no powers by which it can make discoveries which lie beyond the realm of the senses. It has no power of intellectual origination. . . . It understands only phenomena which come within the range of its senses and instinct. It cannot abstractly reason out anything. The animal cannot conceive of the earth being spherical or revolving upon its axis. It cannot apprehend that the little stars in the heavens are tremendous worlds vastly greater than the earth. . . . Therefore, these powers are peculiar to man, and it is made evident that in the human kingdom there is a reality of which the animal is lacking. What is that reality? It is the spirit of man. By it man is distinguished above all the other virtues of the lower kingdoms, he is further endowed with the spiritual faculty, the heavenly gift of consciousness. ('Abdu'l Bahá, 1982, pp. 258; see also pp. 29, 69, 240-41, 268-69)

This model of creation, although hierarchical, does not endorse supremacy or dominance by species in higher levels over those in lower ones. As indicated above, God or the divine spirit is manifest throughout all creation and, therefore, all creatures are to be treated with reverence and respect. In fact, human beings alone, of all creatures, possess the capacity to do so. This is one area where Bahá'í cosmology differs subtly from Native views. Whereas in some expressions of Native spirituality animals are perceived as *consciously* embodying a divine spirit, the Bahá'í view explicitly limits the extent to which nonhuman beings are conscious of spiritual or divine qualities:

The animal is . . . a captive of the world of nature and not in touch with that which lies within and beyond nature; it is . . . unconscious of the world of God and incapable of deviating from the law of nature. It is different with man. Man . . . is capable of

discovering the mysteries of the universe. All the industries, inventions and facilities surrounding our daily life were at one time hidden secrets of nature, but the reality of man penetrated them and made them subject to his purposes. According to nature's laws they should have remained latent and hidden; but man, having transcended those laws, discovered these mysteries and brought them out of the plane of the invisible into the realm of the known and visible. ('Abdu'l-Bahá, 1982, p. 241)

It is precisely because of the human capacity to transcend the laws of nature that morality must be a fundamental aspect of human interactions with the rest of creation.⁹⁰ Without ethical limits or inhibitions being placed on the behaviour of human beings throughout history, our species would have been even more destructive. In the Bahá'í view, divine educators have been necessary throughout human history to offer guidance regarding those ethical limits, guidance that has remained *essentially* unchanged since the dawn of human existence, differing only in the specific applications of certain social teachings appropriate for the time period and geographical region in which the guidance was revealed. Recalling the concept of progressive revelation mentioned in Chapter 1 (see page 18), Bahá'ís believe that at various times in history God has "revealed Himself" to particular individuals who then attracted followers, thus establishing the world's most enduring religions (e.g., Buddhism, Hinduism, Judaism, Christianity, Islam). The Bahá'í concept views the sphere of each human civilization expanding from family unit to village to city to nation-state, and now to encompass the planet. This expansion has occurred as a result of the influence of each of the world's universal religions as it has appeared in human history. Although following in the tradition of the earlier incarnations of divine guidance as expressed in the concept of progressive revelation, the all-encompassing, global mandate of the Bahá'í Faith requires that the principles regarding human activity, especially those related to how the human species applies the unique qualities with which it is endowed, be relevant to healing the ills currently plaguing the

90. Of course, Bahá'ís are not alone in their distinguishing humanity from the rest of nature. René Dubos has this to say: "Animals of whatever kind are specialized. They live only in the ecological surroundings to which they've adapted. But for the past ten thousand years, and perhaps before that, we have been transforming the land in order to adapt it to ourselves. And that, I believe, constitutes a fundamental difference setting the human race apart from all other species" (1990, p. 23).

entire planet. This monumental task is unprecedented in the history of human existence and represents the dawn of a new era in human civilization.

As mentioned above, Bahá'ís distinguish between material and the spiritual planes of existence. The unique status of human beings in the world of physical existence is due to the endowment of those specific qualities that enable us to transcend natural laws. Those abilities also entail a unique obligation, that is, the proper care, preservation, and use of the rest of nature. Without a balanced development of both the spiritual and material aspects of human existence, "severe calamities and violent afflictions" occur. Human history and the current situation offer an overwhelming wealth of empirical evidence that material accomplishments have surpassed the development and manifestation of spiritual qualities to the detriment of human and nonhuman creation. However, all this material advancement could be for naught if the imbalance is not rectified:

. . . until material achievements, physical accomplishments and human virtues are reinforced by spiritual perfections, luminous qualities and characteristics of mercy, no fruit or result shall issue therefrom, nor will the happiness of the world of humanity . . . be attained. For although, on the one hand, material achievements and the development of the physical world produce prosperity, . . . on the other hand dangers, severe calamities and violent afflictions are imminent. ('Abdu'l-Bahá, 1978, p. 283-84)

Despite the achievements of human civilization, one must not be blind to the "discovery of destructive and infernal machines, to the development of forces of demolition and the invention of fiery implements, which uproot the tree of life" and reveal that "civilization is conjoined with barbarism. Progress and barbarism go hand in hand, unless material civilization be confirmed by Divine Guidance, . . . and be reinforced by spiritual conduct . . ." ('Abdu'l-Bahá, 1978, p. 284). Thus, achievements of science and technology are positive and indeed, necessary, elements in human development as long as they occur in an atmosphere that is balanced with a fundamentally spiritual understanding of the broader context in which those achievements occur.

The Bahá'í writings stipulate that nature's manifestation of divine qualities is to be treated with respect and the elements of nature are to be viewed as contributing to human

progress and development and achieving their ultimate potential in service to humanity. Although each "kingdom of existence" is perfect in its form and essence as part of God's creation, it achieves its greatest "honour" and "prosperity" in its service to humanity, thereby bringing it closer to its Creator. 'Abdu'l-Bahá elaborates on this concept:

The excellency, the adornment and the perfection of the earth is to be verdant and fertile through the bounty of the clouds of springtime. Plants grow; flowers and fragrant herbs spring up; fruit-bearing trees become full of blossoms and bring forth fresh and new fruit. . . . This is the prosperity of the mineral world.

The height of exaltation and the perfection of the vegetable world is that a tree should grow on the bank of a stream of fresh water, that a gentle breeze should blow on it, that the warmth of the sun should shine on it, that a gardener should attend to its cultivation, and that day by day it should develop and yield fruit. But its real prosperity is to progress into the animal and human world, and replace that which has been exhausted in the bodies of animals and men.

The exaltation of the animal world is to possess perfect members, organs and powers, and to have all its needs supplied. This is its chief glory, its honour and exaltation. . . .

But real prosperity for the animal consists in passing from the animal world to the human world, like the microscopic beings that, through the water and air, enter into man and are assimilated, and replace that which has been consumed in his body. (1981, pp. 78-79)⁹¹

In conjunction with the service that nonhuman creation provides to humans through their assimilation into each other—the circle is completed with the physical death and eventual decomposition of the human body—humans play an active role in cultivating the rest of creation both as an expression of worship of the Creator and as a means of providing sustenance and shelter for themselves. The existence of human beings on the planet adds a dimension to creation that without us would not exist, that is, the conscious and willful cultivation of the land. When such cultivation is practiced in a spirit of appreciation for the bounties provided by the Creator and with knowledge of the carrying capacity of that specific region, the various species living there have an opportunity to achieve the "exaltation" described above by having their fertility and productivity increased through the wise and skillful application of scientific knowledge. Left on its own, a cultivated plot of land will eventually revert to its "natural," unproductive, jungle-

⁹¹ Despite the omnivorous diet implied by this paragraph, there are several indications in the Bahá'í writings that meat consumption is not a prerequisite to health. Bahá'í teachings not only impel human beings to be kind to animals but also warn against hunting to excess (*Conservation*, 1980, p. 10-11).

like condition in which various species of plants and animals instinctively compete in the struggle for survival.

The Bahá'í view of the spiritual essence of existence is reflected in various qualities that are applied to nature including appreciation, moderation, kindness, compassion, and humility. The first four have been expressed above in various ways. Humility tempers the promotion of active cultivation of the earth by reminding human beings of their role and status in creation:

Every man of discernment, while walking upon the earth, feeleth indeed abashed, inasmuch as he is fully aware that the thing which is the source of his prosperity, his wealth, his might, his exaltation, his advancement and power is, as ordained by God, the very earth which is trodden beneath the feet of all men. There can be no doubt that whoever is cognizant of this truth, is cleansed and sanctified from all pride, arrogance, and vainglory. . . . (Bahá'u'lláh, quoted in *Conservation*, 1990, p. 9)⁹²

The Bahá'í writings are direct in their repeated reinforcement of the development in each human being of those qualities that are most conducive to the peaceful and sustainable advancement of civilization. In the following passage, Bahá'u'lláh gives a voice to the earth, which, unless human values, attitudes, priorities, and practices change, may surpass in its own "exaltation" that of the human species:

They who are the beloved of God, in whatever place they gather and whomsoever they may meet, must evince . . . such humility and submissiveness that every atom of the dust beneath their feet may attest the depth of their devotion. . . . They should conduct themselves in such manner that the earth upon which they tread may never be allowed to address them such words as these: "I am to be preferred above you. For witness, how patient I am in bearing the burden which the husbandman layeth upon me. I am the instrument that continually imparteth unto all beings the blessings with which He Who is the Source of all grace hath entrusted me. Notwithstanding the honor conferred upon me, and the unnumbered evidences of my wealth—a wealth that supplieth the needs of creation—behold the measure of my humility, witness with what absolute submissiveness I allow myself to be trodden beneath the feet of men. . . ." (1976, p. 7)

92. Cf. these words from Black Elk, a Sioux holy man: "Every step that we take upon You should be done in a sacred manner; each step should be as a prayer. Because You have made You will known unto us, we will walk the path of life in holiness, bearing the love and knowledge of you in our hearts" (quoted in Hughes, 1983, p. 14). Jacob Bronowski also emphasizes that in a society that promotes independence of thought it is important to "cultivate habits of humility. . . for without humility no one would give close attention to the opinions of others. Truth is not reached merely by the utterance of new ideas; it requires the study of those ideas. . . . Truth is not reached by momentary flashes of individual illumination, but by the careful consideration of many minds. This is why the society of scientists is a model of democracy. It honors the new ideas of the young and it also honors the old ideas even when they have been overthrown, because it recognizes that the old ideas were not necessarily foolish, but simply lay further back along the road to truth" (1977, p. 201)

It appears that the earth is losing patience in "bearing the burden" that humanity has laid upon it. The "unnumbered evidences" of its wealth are being rapidly depleted and the submissiveness with which it has allowed itself to be "trodden beneath the feet of men" could soon be replaced by conflagrations the like of which humanity has never witnessed.

In their attempt to assist in the process of preventing such a catastrophe, individual Bahá'ís and institutions such as the Bahá'í International Community (BIC) are actively involved at the grassroots level in hundreds of development projects that include sustainable agriculture programs, tree planting initiatives, and irrigation schemes, and at the global level in conferences and other events addressed at devising policies and action plans to deal with environmental problems. In October 1987, the Bahá'í Faith joined the World Wide Fund for Nature's Network on Conservation and Religion, releasing its "Declaration on Nature." Through its Office of the Environment at the United Nations in New York, the BIC has been involved in other projects in an advisory role (e.g., the second World Conservation Strategy Project, published as *Caring for the Earth* [1991]). The BIC has also actively participated in and collaborated with other like-minded organizations, resulting in efforts such as its involvement in the preparatory conferences leading up to the Earth Summit in June 1992 and its high profile not only at the Global Forum at which over 9000 international NGOs participated but also in the main sessions of the Summit itself. The BIC's most recent public release is "World Citizenship: A Global Ethic for Sustainable Development," its submission to the Commission on Sustainable Development (see Chapter 1, page 28). Coalitions of governmental and non-governmental organizations and events such as the Earth Summit represent progress in humanity's effort to deal effectively and constructively with the problems with which it is faced in the closing decade of the 20th century. In the words of one scholar

The effort required to avert the environmental crisis is more significant than just a response to a temporary, though serious emergency. It may in fact push nations into precedent-setting measures for the creation of effective international institutions and legislation. It will be a painful process, but it will elevate society to a new level of global

integration and cooperation, and will help reveal the true identity, nobility and beauty of the human race. (Dahl, 1990, p. 88)

Summary

Bahá'is share the visions of many of those who adhere to the ideals expressed in this chapter, whether they be applied through deep or social ecology, bioregionalism or ecological humanism, or by ecofeminists, Natives, Christians, Jews, or promoters of other religious perspectives. The challenge for all these groups and the individuals who comprise them is to find unity in their common goal, to heal the ills of the earth. This thesis is one effort to assist in finding that unity by drawing attention to moral and spiritual principles that are shared by many environmental philosophies.

The vision of deep ecology is grounded in a profound awareness of the inherent spirituality and interconnectedness of all life. The tenets of the movement represent a necessary alternative to the symptom-oriented strategies that have been put into practice in Western society to deal with environmental problems. Deep ecologists advocate a moderation in human excesses to come back into harmony with nature.

Social ecology shares with deep ecology a criticism of those same symptom-oriented approaches manifested by "reform" environmentalism and offers as well a critique of the social institutions and system that breed injustice. In contrast to deep ecology, social ecology reintegrates the special role and status of human beings into the ecological equation. It also endorses the promotion of biological and ecological diversity.

Ecofeminism reinforces social ecology's more humanized alternative to deep ecology, but goes one step further by integrating the feminine into the analysis by linking men's oppression of women with humanity's oppression of nature. Advocates of ecofeminism share social ecology's critique of institutional hierarchy that leads to dominance and oppression. Ecofeminists are actively involved in a wide range of pragmatic programs and solutions to current social and environmental problems, working within the broader

feminist movement by emphasizing the unity and diversity of women's voices on a number of social as well as ecological issues.

Ecological humanism offers a potential bridge between secular and more explicitly spiritual approaches by integrating humanism and ecology in the framework of an "evolution-centred" cosmology. Ecological humanism acknowledges and accepts the supremacy of the human species in the natural hierarchy that is ignored or rejected by other environmental philosophies. The vision of ecological humanism is more normative and theoretical than prescriptive, offering a profoundly spiritual but not necessarily religious foundation for attitudes toward the nature of the universe and all of creation.

Bioregionalism offers a geographically informed application of the land ethic. In its normative conception, it offers a framework for local or regional communities based on the ecosystemic properties of the natural environment, promoting a scale and style of human activity that reflects the capacity of the local resources to sustain such activity. As such, it advocates moderation, a sensitivity to balance, and an appreciation of the interdependence of all life forms.

Native attitudes toward nature offer a profoundly spiritual foundation upon which to base a sustainable environmental ethic. Their visions reflect a deep awareness of and sensitivity to the manifestations of the divine throughout creation. Many Native traditions have provided the inspiration for nonhierarchical visions of environmental ethics such as deep ecology, social ecology, and ecofeminism. Bioregionalism has found common ground with the Native view in its emphasis on the importance if not the sacredness of place. Native spirituality reflects a deeply sensitive understanding of the interdependence and balance inherent in nature that unites all living things. Natives also advocate an understanding of the capacity of the earth so that human activity does not exceed the bounds of moderation, thus impeding the ability of the rest of creation to flourish.

Contemporary applications of biblical theology share with Native spirituality an awareness of the spiritual connections between the Creator and the creation. Each

individual is inextricably part of the larger community and the community is manifest within each individual. This interconnectedness implies an understanding of the interdependence of each constituent element in creation in maintaining the integrity and sustainability of the whole. This holistic vision shares common ground not only with Native beliefs but also with deep ecology and ecological humanism. The inclusiveness of the self-in-community concept shares some of the ecofeminist vision as well. Contemporary theologians also reveal the inspirational figures from within the history of the Judeo-Christian tradition who manifested qualities that are now perceived as crucial in understanding and solving contemporary environmental problems. Ecotheologians offer a religious vision that builds on the tradition that has shaped the development of Western culture and suggest alternative interpretations to those that have been destructive to human and nature's sustainability in the past.

The Bahá'í Faith is the newest of the religious traditions, following in a long line that stretches back into human history for millennia. The Bahá'í Faith reaffirms the need for divine teachings in the education and development of humankind by offering a coherent explanation of the material and spiritual planes of existence. By reconciling the conflict between the story of creation and evolution theory, the Bahá'í vision reveals the inherent harmony between science and religion. The resultant reconceptualization of humanity's place in creation and in the evolution process allows for a conception of natural hierarchy that places human beings at the top without the dominance and oppression justifiably criticized by contemporary theorists. The Bahá'í principle of the inherent equality of the sexes offers a proactive means of dealing with ecofeminist concerns regarding the oppression of women and nature. The Bahá'í view that nature manifests the divine spirit in all its forms is akin to the Native conception which shares the ethic of reverence and care for all the creatures of the earth. In addition to a broad and profound theoretical and epistemological foundation for its tenets, the Bahá'í Faith offers an institutional framework based on proven methods of consultation and conflict resolution, fostering

coalitions with other organizations, both religious and secular, to establish the institutions and the theoretical basis upon which, among other needs in the current global climate, a sustainable environmental ethic can be established.

Several of the principles upon which that ethic might be based are examined in the next chapter. These principles are drawn from those approaches that appear to offer the greatest potential for providing solutions to the environmental crisis. As noted in this summary, concepts such as interdependence, interconnectedness, moderation, justice, and balance appear repeatedly in many philosophical and spiritual approaches to environmental problems. It is also apparent that a reconciliation of the historical conflict between science and religion is not only necessary but also completely within the realm of probability. The natural harmony between these two fields of human existence will be explored in more detail in Chapter 5. Finally, "unity in diversity," the concept that has been implicitly, and at times explicitly, evident throughout this work will be presented as the unifying theoretical framework upon which a global sustainable environmental ethic might be based.

Chapter 5

Spiritual and Moral Foundations of a Global Sustainable Environmental Ethic

What is missing from too many worldviews today . . . is the connectedness of human beings with the land from which all of us—today and tomorrow—*must* find our sustenance. Each culture must retrieve within its vision what many primitive peoples understood about their relations with the soil, air and water of Earth. . . .

Without deep appreciation of the beauty of the land that nourishes us, we cannot long survive. Yet such appreciation is not limited to the visions of primitive societies; it exists in the sacred texts of every major religion. We need but search our own heritage to recapture a sense of ecological harmony.

- Mary Clark

The ground rules of sustainability, development and equity rest on the universal need for life, progress and justice, and apply to all societies individually as well as collectively. A world society that is sustainable, developing and equitable does not spend the resource capital of future generations, does not suppress motivation for social and economic growth, and does not violate the sense of justice of the vast majority of its people. But it can be a highly diverse society in which different cultures, ideologies, values and ideals flourish side by side, and to mutual benefit.

- Ervin Laszlo

The last three chapters have revealed the complexity of the issues involved in the history of environmental thought, especially when the values that underlie human behaviour are made explicit. The diversity of ways of dealing with the environmental crisis offers a clue to the different motivations and beliefs that drive human interaction with the rest of creation. Contrary to what contemporary politicians and pundits might try to tell the public, the conflict is not simply between the economy and the environment. That type of superficial dichotomy is merely a smokescreen that blurs a clear picture of the fundamental essence of the problem and potential solutions.

One of the most powerful factors inhibiting a clear view of the crisis is the lack of unity among those who are attempting to solve it. Attempts have been made to offer

theoretical frameworks or visions by which environmentalists might unify their efforts. Bryan Norton's *Toward Unity among Environmentalists* responds to the fragmentation in environmentalism: "There has emerged within the movement no single, coherent consensus regarding positive values, no widely shared vision of a future and better world in which human populations live in harmony with the natural world they inhabit" (1991, p. 3). Norton suggests focusing on single policy issues and advocates "moral pluralism" within a broad, overarching worldview. Although he never actually uses the phrase, Norton appears to advocate a "unity in diversity" conception for what he calls an "integrated worldview": "The moral pluralist can look for common ground from which to construct a new, philosophically, culturally, and politically viable worldview that sees humans as integrated into large systems and that values objects as parts of their human, cultural, biotic, and abiotic contexts." However,

to simply say that different principles of value apply in different contexts introduces moral chaos unless something is said about which particular principles apply when. . . . Pluralism can provide guidance in environmental policy only if it includes second-order principles that help to determine which of its diverse first-order moral criteria apply in given situations. . . . A truly integrated system of thought, an adequate environmental worldview, would state rules of application according to the systematic context of the management problem faced. The criterion, according to a contextual approach such as Leopold's land ethic, should be based on the temporal and spatial scale appropriate to the problem at hand. (1991, pp. 200–1)

To Norton, scientific knowledge is the empirical foundation for determining these temporal and spatial scales but not the moral criteria associated with them: "The emerging consensus is unquestionably naturalistic in the broad sense that science informs and constrains decisions about what to do in these cases, without dictating specific values and in the sense that a consensus in policy emerged within an inductive debate concerning scientifically determinable local conditions" (p. 202). Basically, scientific evidence affects the types of action that are taken without *directly* imposing values. Values are not logically derived from facts but can be developed through increased knowledge of facts. Scientific knowledge (or lack of knowledge) of, for example, a wetland will play a large but not exclusive role in determining whether one shoots with a gun or with a camera.

It is apparent, then, that environmentalism, in addition to being a political activity engaged in critiquing and transforming the current economic and social system, is a fundamentally moral endeavour. The various contributors to the movement can and do play a crucial role in educating the public. The fragmentation within the movement, however, inhibits its progress. In addition to Norton's work, efforts have been made to find common ground between deep and social ecologists (Bookchin and Foreman, 1991) and ecofeminism and bioregionalism (Plant, 1994). This unity is being discovered not only at the level of specific issues but also in terms of values. This chapter contributes to that dialogue, offering several principles that have been perceived in the philosophical and spiritual approaches discussed in the last chapter. Although there may be others, the following appear to be the most compelling: interdependence and interconnectedness, balance and moderation, equity and justice. In addition to discussing these concepts in general terms and how they are perceived in several environmental philosophies, this chapter offers an argument for regaining the lost harmony between science and religion, especially as it applies to the concept of unity in diversity.

Interdependence and Interconnectedness

This we know: the earth does not belong to man; man belongs to the earth. This we know. All things are connected like the blood which unites one family. All things are connected.

Whatever befalls the earth befalls the sons of the earth. Man did not weave the web of life; he is merely a strand in it. Whatever he does to the web, he does to himself.

- attributed to Chief Seattle

In this world we may be diverse but we are also interdependent. There can be but one future for all of us in the human family. And we must choose whether it will be a future of distinction, or a future of extinction.

- Ervin Laszlo

The intimate, inescapable interdependence of living things implies a certain stability a certain dynamic reciprocity. Its weakening or destruction unleashes the capacity of creatures to destroy each other and themselves as well.

-- Barbara Ward and René Dubos

Webster's Collegiate Dictionary identifies "interconnected" as an adjective invented in 1865, meaning (1) "mutually joined or related"; and (2) "having internal connections between the parts or elements." Interdependent is defined in the *Random House Unabridged Dictionary* as "mutually dependent or dependent on each other." In both cases, the concept of mutuality, represented by the prefix "inter" is explicit. The fact that this concept is expressed in terms of human relations with the rest of creation is a crucial factor in the development of a unifying environmental ethic.

The concept of interconnectedness arises out of an ecological understanding of the universe. In fact, the roots of "ecology" itself date back also to the mid 19th century when the term was originally invented, thus reinforcing the links between this new scientific discipline and one of its central concepts. Roszak has described ecology as "the closest our science has yet come to an integrative wisdom" and as "the one science that seems capable of assimilating moral principle and visionary experience" (1973, pp. 368, 371). Indeed, ecology forms the scientific and epistemological foundation for current efforts to understand the complexity of the biosphere and to deal constructively with current problems. There is a growing awareness and consensus regarding the interdependent and interconnected nature of all life, that nothing occurs without a reaction, that changes on one side of the planet can have significant impacts on the other side. As scientific knowledge of the complexity of ecosystems is increased, efforts based on previous understandings become increasingly ineffective and, eventually, destructive.

The approaches discussed in Chapter 4 that appear on the lower two-thirds of the map all, to some extent, express an awareness of the interconnectedness of life. Deep ecologists, ecofeminists, bioregionalists, advocates of Native spirituality, some Judeo-Christian interpretations, and Bahá'is appear to be most sensitive to this factor in nature. They all offer a profoundly spiritual insight into an understanding of the concepts of ecology. In this respect, they integrate their respective conceptions of religious or spiritual truth with ecological insights that are based on scientific knowledge. The result

is a comprehensive and balanced understanding of life on this planet, at least to the extent that science in the 20th century has revealed the absurdity of certain superstitious concepts or previously ill-informed views of the nature of the universe.

The clearest source of division among the groups mentioned above is in their respective concepts of natural hierarchy. Deep ecology, ecofeminism, and some forms of Native spirituality adopt an egalitarian view in which all creatures on the planet are accorded the same inherent value. Some extreme deep ecologists are radically biocentric, showing so-called "eco-fascist" tendencies that fail to include human beings in their scheme of rights and inherent value. Ecofeminism, in following the tradition established by its parent, the broadly based feminist movement, denounces any form of hierarchy as inevitably oppressive. In this respect, ecofeminism makes its strongest link with social ecology. The animistic and pantheistic expressions of some Native cultures view all creation as inherently equal, each creature possessed of a spirit and interconnected and interdependent at this spiritual level and, in practice, at a physical level. As mentioned in Chapter 4, it is crucial to acknowledge explicitly this generalization of Native spirituality. Each culture has its own permutation of this general characterization.

Environmental approaches that are more directly rooted in theological tradition view nature as inherently hierarchical but not necessarily oppressive. The Judeo-Christian tradition in the West has expressed itself in forms that have been derived by human interpretations and sometimes misinterpretations of religious scripture. Religious institutions have often been characterized by the same kinds of domination and abuse of power that secular institutions can reflect. However, it is important not to reject the source or substance of a religion simply because the human beings who have "organized" it have created a form or structure that is abhorrent. Newer interpretations of religious scripture, such as process theology, are attempting to formulate conceptions of traditional religions that reflect and incorporate contemporary scientific knowledge. Current shifts in policy in the Roman Catholic Church exemplify attempts to reconcile the historical

conflict between science and religion. The Vatican's recent admission of error in its historical treatment of Galileo is further evidence that orthodox and literal interpretations of religious scripture pertaining to the natural world must make sense scientifically.

The Bahá'í Faith deals with these issues explicitly. As discussed in the previous chapter, the Bahá'í conception of natural hierarchy is clearly based on an ecological understanding of the planet that also incorporates a spiritual component. The interpretation by contemporary scholars of many of the principles contained in the Bahá'í writings reinforces these concepts in their practical applications. For example, in discussions of social and economic development, concepts that pertain to the natural world, such as interdependence, are equally applicable to human relations:

As individuals become more sure of themselves and more self-reliant, they paradoxically find their relationships with others improving and can learn to cooperate more fruitfully. Thus there is an important distinction between interdependence and dependency. As individuals grow and mature, interdependence increases and dependency decreases. Interdependent people have a sense of dignity and self-worth, while dependency undermines these essential human qualities. (Dahl, 1984, pp. 166-67)

This notion of interdependence between humans has been expressed in feminist literature in the concepts of "self" and "other" that patriarchal societies have demonstrated as male domination of females and human domination of nature. A mature outlook allows for an integration of "self" and "other," accepting difference as positive rather than as something to be feared, suppressed, or rejected. Deep ecologist Bill Devall refers to the "subversive" insight of ecology "that not only is everything connected with everything else but there is a literal intermingling of person and Other, of mind-in-nature" (1988, p. 19). Human beings are viewed not only as interdependent with the rest of creation but also as interdependent with each other. In the Bahá'í view, this interhuman unity is essential if we are to deal effectively and sustainably with current problems.

This interdependence is not only ecological but, extended beyond the interpersonal level, it also becomes the embodiment of international unification at the global level. The devastating effects of two world wars within one half century resulted in the formation of

the United Nations as a preliminary effort to prevent such catastrophes ever recurring. In 1994, the effectiveness of that organization comes increasingly under scrutiny, but the initial context in which it was formed must not be forgotten. The perception of national interdependence that gave rise to the establishment of the United Nations is more relevant than ever, despite the atrocities underway throughout the world that undermine the effectiveness of a multi-national endeavour. The tribalism that perpetuates such tensions is now increasingly perceived as a deterrent to dealing with problems occurring at every geographical scale of human activity, especially those at the global level. One scholar perceives contemporary political ideologies such as liberalism and Marxism as counterproductive to "recognizing interdependence and safeguarding diversity" because they perpetuate dreams of "extending national hegemony into international uniformity" (Laszlo, 1989, p. 75). Laszlo's inclusion of diversity as a concept to be safeguarded along with a recognition of the inherent interdependence of nations reveals again the importance of the concept of unity in diversity, which will be discussed further below.

It is perhaps appropriate to conclude this section with some of the closing remarks from a book that, despite being over 20 years old, is possibly more relevant today than it was when it was produced as a result of the 1972 Stockholm conference:

It is . . . possible that recognition of our environmental interdependence can do more than save us, negatively, from the final folly of war. It could, positively, give us that sense of community, of belonging and living together, without which no human society can be built up, survive, and prosper. Our links of blood and history, our sense of shared culture and achievement, our traditions, our faiths are all precious and enrich the world with the variety of scale and function required for every vital ecosystem. But we have lacked a wider rationale of unity. . . . [I]t is only in our own day that astronomers, physicists, geologists, chemists, biologists, anthropologists, ethnologists, and archaeologists have all combined in a single witness of advanced science to tell us that . . . we do indeed belong to a single system, powered by a single energy, manifesting a fundamental unity under all its variations, depending for its survival on the balance and health of the total system. (Ward and Dubos, 1972, p. 219)

This brief passage encapsulates many of the themes that are offered throughout this thesis: the need for fundamental unifying concepts and principles in dealing with human interactions with the rest of nature, the potential for unity among different environmental

philosophies, and a balanced conception of nature. Although the current fragmentation and tensions within environmentalism in particular and throughout the world in general belie the vision expressed here, there is still a growing convergence in thought from diverse fields of human endeavour that the protection of the planet, the only home we have, is the most important task facing humanity today.

The next section introduces another pair of principles, one of which has already been expressed as being firmly linked with the concepts of interconnectedness and interdependence.

Balance and Moderation

The engines of distraction are gradually destroying the inner ecology of the human experience. Essential to that ecology is the balance between respect for the past and faith in the future, between a belief in the individual and a commitment to the community, between our love for the world and our fear of losing it—the balance, in other words, on which an environmentalism of the spirit depends.

—Al Gore

Life and the environment are one thing, not two, and people, as all life, are immersed in the one system. When we influence nature, we influence ourselves; when we change nature, we change ourselves. A concern with nature is not merely a scientific curiosity, but a subject that pervades philosophy, theology, aesthetics, and psychology. There are deep reasons that we desire a balance and harmony in the structure of the biological world and that we seek to find that structural balance, just as our ancestors desired and sought that kind of balance in the physical world. . . .

—Daniel Botkin

One of the fundamental principles underlying an ecological understanding of nature is the balance that must be maintained within and among the ecosystems that comprise the planet. Barbara Ward and René Dubos have described this ecological principle as “the interplay between vast cosmic unities and the minute instruments of equilibrium [that] is the very stuff of existence” (1972, p. 42). Another way in which this principle has been expressed is “carrying capacity,” the natural limitations that shape the existence of the various elements in a particular ecosystem. In fact, as mentioned earlier in this thesis the second World Conservation Strategy’s definition of sustainable development incorporates

the concept of carrying capacity into its vision. The natural laws inherent in the earth's carrying capacity result in the relationships between predators and their prey, ultimately determining the population size of each species. When human beings appear in an ecosystem, there is great potential for disruption of that natural balance since humans possess the ability to perceive and transcend natural laws. Human behaviour is constrained to a certain extent until the acquisition of knowledge and the development of technology allow for activities that exceed the carrying capacity of the ecosystem when that knowledge is not balanced with wisdom or a sense of moderation.

Moderation as a principle is characterized by an avoidance of excess or extremes of behaviour. When moderation is not practiced, in the words of one scholar, one has "undisciplined expansion and self-inflation," which only lead to destruction (Berry, 1988, p. 44). In "The Pursuit of Absurdity," René Dubos writes that Western society is

threatened by the absurd development of characteristics that were highly desirable when they first emerged. Thus the escape from physical drudgery has degenerated into contempt for physical work; the struggle for equality of rights has led to the belief that there is equality of talents; the use of the automobile for greater freedom of movement has turned into a compulsion; efficiency has become an end unto itself, destructive of diversity and of the quality of life; economic growth, which originally produced more goods for more people, is now largely pursued for its own sake, even when it means ecological degradation. (1990, p. 246)

The Bahá'í writings are equally explicit regarding some characteristics in Western society:

It is incumbent upon them who are in authority to exercise moderation in all things. Whatsoever passeth beyond the limits of moderation will cease to exert a beneficial influence. Consider for instance such things as liberty, civilization and the like. However much men of understanding may favorably regard them, they will, if carried to excess, exercise a pernicious influence upon men. . . . (Bahá'u'lláh, 1976, p. 216)

If carried to excess, civilization will prove as prolific a source of evil as it had been of goodness when kept within the restraints of moderation. (p. 342-43)

With the growing sensitivity to the ecological impacts of human behaviour over the centuries comes an understanding of the need for balance and moderation in human affairs not only within the species but in human relations with the rest of creation as well. "The fullest enjoyment of the fruits of nature is obtained . . . if they are taken in moderation or according to the golden rule" (Huddleston, 1976, p. 48). Indigenous

cultures across the globe have displayed these characteristics for millennia. Early Judeo-Christian societies also practiced more sustainable or moderate approaches to nature. It is only in Western society in recent centuries that this wisdom has become obscured by other pursuits. The most critical distinction between modern Western culture and those of the hundreds of preindustrial cultures around the world seems to be in terms of the depth and breadth of their respective conceptions of spirituality.

Chapter 2 of this thesis demonstrates how the development of more secular approaches to human existence resulted in an increased sense of detachment and alienation of human beings from the rest of nature. Those ethics that have advocated more restrained interactions between humans and the natural environment have been based on profound sensitivities to the spirituality inherent in all creation. In the post-Enlightenment period, those ideas were eloquently expressed in the Romantic era. In contemporary Western society, the literary (as opposed to extreme) expressions of deep ecology have had the largest impact on public awareness of and sensitivity to a more spiritual perception of nature. Newer movements such as ecofeminism and bioregionalism also contribute to this recaptured awareness of the spirituality inherent in nature that was lost after the Middle Ages. Secular society is again recognizing what the various religious scriptures have taught since the dawn of human existence: the importance of incorporating a spiritual component in one's worldview. Whether that spirituality is based on a belief in one Creator or a pantheistic or animistic sense of transcendental spirit is a matter of personal faith. The important factor is a recognition of the need for balance between the physical or material world and the spiritual world. The Bahá'í writings offer an explanation of this balance that again reinforces the inherent harmony between science and religion:

Scientific knowledge is the highest attainment upon the human plane, for science is the discoverer of realities. It is of two kinds: material and spiritual. Material science is the investigation of natural phenomena; divine science is the discovery and realization of spiritual verities. The world of humanity must acquire both. A bird has two wings; it cannot fly with one. Material and spiritual science are the two wings of human uplift

and attainment. Both are necessary—one the natural, the other supernatural; one material, the other divine. (‘Abdu’l-Bahá, 1982, p. 138)

This chapter demonstrates how intertwined these spiritual and moral principles are in their applications to human behaviour. The inherent interdependence and interconnectedness of creation require a balanced and moderate interaction among the creatures who share the planet. Only human beings have the capacity to perceive these relationships and transcend the laws that govern them. Therefore, humans have a unique responsibility to themselves and the rest of creation—to engage in behaviour that reflects and respects their knowledge and wisdom. The next principles to be discussed, equity and justice, are also interdependent, not only with each other but also with those already discussed.⁹³

Equity and Justice

Without equity there is no justice, and without justice there is no morality.

Peter Kropotkin

There can be no justice without sustainability, and there can be no sustainability without justice.

—Charles Birch and John B. Cobb, Jr.

Observe equity in your judgment. . . . He that is unjust in his judgment is destitute of the characteristics that distinguish man’s station.

—Bahá’u’lláh

Whereas concepts like interconnectedness and interdependence have arisen only in the last century or two as ecology has emerged as a valid scientific endeavour, moral and political philosophers, legal professionals, politicians and others have been dealing with the concepts of equity and justice for centuries. The cornerstone of the Enlightenment could be said to be based on notions of justice and how human society could best provide for the equitable distribution of rights and goods for the entire population. The development

93. For example, Bahá’u’lláh links moderation and justice as follows: “Overstep not the bounds of moderation, and deal justly with them that serve thee . . . Deal with them with undeviating justice, so that none among them may either suffer want, or be pampered with luxuries” (1976, p. 235). And again, “Whoso cleaveth to justice, can, under no circumstances, transgress the limits of moderation” (p. 342).

of theories like utilitarianism were certainly based on that vision. Contemporary scholars continue the debate, constantly seeking explanations for injustice and trying to devise theories of justice that will reveal solutions to current problems.

In *The Search for a Just Society*, John Huddleston offers the following definition of a just society: "a society which gives freedom to all its citizens and encourages them to achieve their full potential — physical, mental and spiritual" (p. *xiii*). This vision is based on four principles: (1) "an ethical system that inspires a sense of the oneness of mankind, intellectual integrity, and responsibility both for development of the self and for promoting the welfare of others; that creates a balance between rights and duties"; (2) "provision of physical security, both for the person and necessary personal property"; (3) "all citizens have to have a say in the management of the affairs of their community," either directly (e.g., through referenda) or indirectly (e.g., election of representatives); and (4) "equal opportunity for all citizens," which means no discrimination on the basis of sex, race, culture, economic status, or religion. The practical ramifications of the last principle are (a) no extremes of wealth and poverty and (b) universal access to education for the development of the body, mind, and spirit (pp. *viii-xiv*).⁹⁴

Charles Birch and John B. Cobb, Jr. equate the notion of justice with "the idea of the good life" (1981, p. 236). Their vision does not require absolute equality but, drawing from the notion of interdependence, it does, according to John Rawls,⁹⁵ require that "we share one another's fate and provide equal opportunity for each person to develop his or her talents" (p. 236). Like Huddleston, Birch and Cobb's notion of justice includes freedom and democracy, the ability of people to "participate in decisions about their own destiny" including the freedom to dissent (p. 238).

⁹⁴. For two substantially different responses to the question, "Is a just society desirable and attainable?" see Heller (1987) and Huddleston (1989).

⁹⁵. Rawls is widely seen as offering the most cogent contemporary theory of justice in his widely cited *A Theory of Justice*. His work is not examined in any depth here for two reasons: (1) a thorough analysis is far beyond the scope of this exercise; and (2) his theory depends on and incorporates political rather than metaphysical concepts. His contribution to public policy as it relates to environmental issues is included in Sagoff, 1990.

The liberal ideals of freedom, equal opportunity, and participatory democracy are essential features of any society that calls itself just. How do these principles relate to the natural environment? Initially, it might seem that natural resources would be perceived primarily for their instrumental value. As long as humans are free to use those resources, have equal access to them, and can participate in the decision-making processes involved in their conservation and development the principles underlying a just society are met satisfactorily. Indeed, early 20th-century American conservationists "stressed that natural resources, which belonged to all people, should be retained in public control in order to insure that the benefits of resource development were distributed fairly." These conservationists also "saw wise use of the environment as a tool to foster grass roots democracy" (Koppes, 1988, p. 235). The promotion of equity in environmental conservation insured that ideally "the benefits of natural resources development . . . [were] widely distributed rather than concentrated in a few hands" (pp. 233-34).

However, viewing natural resources solely in terms of their instrumental value denies and ignores the value inherent in creation. The ongoing attempt on the part of various proponents of more ecologically informed environmental ethics to offer a sustainable alternative to that attitude has been the cornerstone of the environmental movement. Equity and justice are essential to the *sustainable* development of human civilization.⁹⁶ And since human civilization is ultimately dependent on and vulnerable to the health of the natural environment, these principles are also essential in a global environmental ethic.

The secular approaches discussed in Chapter 4 that offer the greatest potential for contributing to further debate on notions of social and environmental justice are social ecology and ecofeminism, already establishing their mandate as critics of the prevailing

⁹⁶ The Bahá'í writings offer many exhortations, especially to those in positions of authority, to deal with others with justice and fairness: "The structure of world stability and order hath been reared upon, and will continue to be sustained by, the twin pillars of reward and punishment. . . . Take heed, O concourse of the rulers of the world! There is no force on earth that can equal in its conquering power the force of justice and wisdom. . . . Blessed is the king who marcheth with the ensign of wisdom unfurled before him, and the battalions of justice massed in his rear. . . . There can be no doubt whatever that if the day star of justice, which the clouds of tyranny have obscured, were to shed its light upon men, the face of the earth would be completely transformed" (Bahá'u'lláh, 1976, p. 219).

social and political systems and the ideologies underlying them. Although not discussed in this thesis, the political parties that have been formed to work within the current political framework to promote the environmental agenda also have great potential.

For spiritual insights into these principles, Native spirituality, contemporary interpretations of Judeo-Christian scripture, and the Bahá'í Faith all offer visions and analyses that bear further examination. In terms of justice in human interactions with the rest of nature, Native beliefs are based upon the universal balance that must be maintained to ensure that life continues. The dispensation of justice should humanity exceed its bounds would be the extermination of the species to ensure that the rest of creation could survive and progress. The epigraph from Birch and Cobb opening this section links justice with sustainability, thus reflecting the interdependence of these principles in the ecological worldview of process theology. The Bahá'í concept of justice is primarily based on human interactions with other humans. Justice is maintained when there is a balance between the material and spiritual worlds of existence. In the Bahá'í view, when civilization recovers from its attachment to materialism and recognizes and appreciates the inherent spiritual essence of existence, the entire planet will display the benefits of that achievement. 'Abdu'l-Bahá offers the following vision of this time in human history:

... this twentieth century is the dawn, or beginning, of spiritual illumination, and it is evident that day by day it will advance. It will reach such a degree that ... the heavenly light will dispel and banish earthly darkness. Divine healing shall purify all ills, and the cloud of mercy will pour down its rain. ... Among the results of the manifestation of spiritual forces will be that the human world will adapt itself to a new social form, the justice of God will become manifest throughout human affairs, and human equality will be universally established. (1982, pp. 131–32)

One of the most fundamental aspects of the transformation that seems to be underway in this century is the increased awareness in many fields of the need to reconcile the historical conflict between science and religion. As mentioned throughout this thesis, these two aspects of human endeavour are inherently in harmony with each other. The following section expands upon that theme.

Harmony of Science and Religion

... religion claims to interpret the word of God, and science to reveal the laws of God ... It is more and more clearly seen that the interpretation of the laws by which the universe is governed, extending from the invisible rays of the celestial world to the most minute manifestations of organic life, reveal one plan, one purpose, one supreme sovereignty—far transcending the highest conceptions to which the human mind can attain respecting this sovereign and infinite Power. ...

—Daniel Coit Gilman

I defy anyone to live intimately with spring, to be witness at the rebirth of the green world, and still think that man owns the earth. Out here we know who didn't make the hills, even if we aren't altogether positive who did.

—Hal Borland

These opening thoughts reveal a sensitivity to the wonder of the universe, finding common ground in the complexity of nature even though they offer differing views on how it came to be. Gilman shares the view of many of his contemporaries in the 19th century who pursued science as a means of acquiring more knowledge of their Creator. As mentioned in Chapter 3, early geographer Archibald Geikie described the purpose of science as being to reveal “more and more of that marvelous plan after which this vast world has been framed, to gain a deeper insight into the harmony and beauty of creation, with a yet profounder reverence for Him who made and who upholds it all” (quoted in Livingstone, 1984, p. 22). Gilman and Geikie demonstrated in their own ways an awareness of and sensitivity to the themes that were developed and pursued by natural theologians such as John Ray and William Derham in the 18th century. These themes were maintained throughout the 19th and into the early 20th century by Romantics such as William Blake and Ralph Waldo Emerson.

Borland's comment reflects the skepticism more characteristic of 20th century secular attitudes towards the religious foundations for spirituality. Many contemporary scientists, rather than rejecting any notion of a Creator completely, maintain an attitude that science alone does not provide all the answers any more than religion does. In *Earth in the Balance*, Al Gore cites a radio call-in show with Arno Penzias, who shared the

Nobel Prize for discovering a measurable echo of the Big Bang. When asked what existed before the Big Bang, Penzias said he didn't know

but that the answer most consistent with the mathematical evidence was "nothing." When the next caller, infuriated by his answer, accused him of being an atheist, he replied, "Ma'am, I don't think you listened carefully to the implications of what I said." Those implications—including the notion that some kind of Creator might be responsible for making "something" where there was once only "nothing"—suggest a potential for healing the hostility of science toward religion. And if science and religion are one day reunited, we may recapture a deeper curiosity about not only the nature of existence but its meaning as well, a deeper understanding of not only the universe but our role and purpose as part of it. (1993, p. 254)⁹⁷

Many of the most celebrated scientists of the 20th century have been loathe to reject the notion of the existence of a conscious force that is responsible for all creation as readily as are others in contemporary Western society. The lay public are more likely to adopt secular attitudes toward and interpretations of religion, following the tradition laid down by the intellectual elite during the Enlightenment of questioning the validity of anything that cannot be grasped and explained in rational terms with basic human intelligence. The result has been an attachment to secular humanistic values that is nearly as blind to alternative understandings of the universe as is the orthodoxy practiced in certain denominations of Christianity today. Fundamentalism is, of course, not exclusive to Christianity. It appears throughout the world in rigid attachment to orthodox interpretations of most religions. Even secular humanism has become a religion for many who view the products of the human mind supreme. The advocates of these views have had the highest aims for their endeavours, seeking to improve human civilization and lessen the misery of their fellow inhabitants. Scientifically oriented humanism without a solid religious foundation, however, results in unintentional consequences:

97. Religious scriptures are less tentative in their identification of the source of creation, as this passage from the writings of Bahá'u'lláh indicates: "All-praise to the unity of God, and all-honor to Him, the sovereign Lord, the incomparable and all-glorious Ruler of the universe, Who, out of utter nothingness, hath created the reality of all things, Who, from naught, hath brought into being the most refined and subtle elements of His creation. . . . Nothing short of His all-encompassing grace, His all-pervading mercy, could have possibly achieved it. How could it, otherwise, have been possible for sheer nothingness to have acquired by itself the worthiness and capacity to emerge from its state of non-existence into the realm of being?" (1943, pp. 102).

Along with such achievements as air pollution, industrial carcinogens, acid rain, and nuclear wastes, modern progress left its characteristic mark on the influence of religion. . . . Just as progress did not *intend* to foul the air, so it undermined religion in an offhand, incidental way. As science and technology prospered, they dominated the public mind and displaced religion as the highest expression of human uniqueness and genius. Science encouraged not faith and awe, but a dismantling cast of mind: take it apart, figure it out, make it better. Religion demanded reverence before the unknowable; science promised that, given enough R and D, nothing was unknowable. (Fox, 1981, p. 358)

Religion's "demands," when they are devoid of or contrary to rational explanations, are just as unacceptable and unsustainable as science's "promises" when they ignore the invisible but no less essential foundations of human existence and the limitations of human intelligence. The fact is that

both science and religion are human social activities. As such, they cannot claim to be purer or more exalted than their ultimate influence on society. This does not mean that such activities do not draw on invisible sources of inspiration and power to produce their effect. It means only that the evidence for the existence of such hidden well-springs of creativity can only be measured by the ultimate, realizable effect which these activities or institutions do indeed produce.

. . . When the true purpose and nature of science are understood and when the true purpose and nature of religion are understood, then there is, *de facto*, no conflict. An essential unity is discovered, a unity which was there all along but which was hidden by the aberrations in the articulation of the two viewpoints (Hatcher, 1977, p. 2)

This hidden unity is based on a universal truth, one truth perceptible to all who seek it with open hearts and minds. This truth remains hidden if it is investigated using only one set of tools, that is, if the seeker follows an exclusively religious or exclusively scientific approach. As mentioned earlier, the pursuit of religious truth without the balanced application of scientific knowledge can result in superstition and blind faith. The pursuit of scientific knowledge without a foundation grounded in awareness and application of the values derived from religion can be dehumanizing and result in the blind pursuit of materialistic goals. Ervin Laszlo writes, "the perennial wisdom of the great religions, of great artists and great humanists is needed to complement the technical expertise of the sciences because human beings and societies are, and always will be, far more than an assemblage of processes that can be reduced to scientifically determinable 'facts' " (1989, p. 50). In contrast to the Enlightenment endeavour to gain knowledge solely by rational

methods, a balanced understanding of the importance of religion and science in such a pursuit views the sole application of reason as limited:

The rationalist philosophy exalts "reasoning" as the ultimate tool in the quest for understanding. Reasoning, however, is a process that operates on assumptions but cannot provide them. Therefore, reason, in and of itself, cannot provide a value system, let alone one with universally recognized validity. This engenders conflict between those who have "reasoned" to incompatible conclusions. . . . In particular, rationalism provides no motivation to make sacrifices for one's values, because there is no focus of purpose that transcends the selfish vested interests that divide humanity. Rationalism provides no accountability for one's conduct during this life, and therefore its proponents will find "reasoning" to justify whatever they wish to do. (Aull, 1988, p. 11)⁹⁸

One of the most pernicious phenomena of post-modernism is the allowance for the rational justification of any activity or ideology on the basis of accepting a plurality of worldviews. This acceptance of diversity has led to an "anything goes" ethic that, taken to its logical extreme, allows for as many accepted viewpoints as there are individuals to express them. The political consequence of such a paradigm is anarchy. The other logical extreme is a totalitarian system in which one view dominates, dictating from a position of supreme power and authority the actions of every individual within its domain and attempting to control even the thoughts and feelings of the people. Somewhere between these two extremes is a democratic and just system that allows for the free expression of individual conscience. The difficult issue here is the foundation for that conscience. From what or whom do we derive our values? Upon what principles do we establish our ethical beliefs? What is the source of our moral sensibilities? Who is "we"?

To answer these questions, we must seek sources of knowledge that are inclusive rather than exclusive. We must seek visions and worldviews that embrace all of humanity regardless of colour, sex, language, ethnicity, religion, age, geographical origin or location, or the myriad other factors human beings use to justify acts of violence, destruction, and brutality. We must seek and put into practice those programs of action that advocate principles that benefit all living inhabitants of the planet, not just humans.

98. Cf. David Ehrenfeld cited in Chapter 1: "By concentrating on one part of human nature, reason, at the expense of the other, we do ourselves a disservice. . . . A clever person can use reason to support any course of action that he or she pleases—it takes decent feelings to pick the right one" (1981, p. 46).

We must embrace those worldviews that offer not only high spiritual and moral standards but also well-articulated, practical guidelines for organizing all human affairs, especially those related to our use of the natural environment upon which our survival depends. We must test these systems using all of our faculties: our hearts, our souls, and our minds.

Bronowski distinguishes between Old Testament values (truth, justice, and integrity) and New Testament values (love, kindness, family loyalty, human charity), asserting that neither set is complete without the other and referring to the modern schism between the first set of values as reflected in science and the second as reflected in art and religion as "an unbearable division." He says that "the moral problem of our century is to make the values of science as much a part of our lives as are the values which religion and literature have long glorified. We must learn to build a complete morality . . ." (1977, p. 202).

Many contemporary scientists recognize that without a profound transformation in human attitudes, we will continue to repeat the mistakes of the past, perpetuating the division between religion and science. Lewis Mumford includes human and nonhuman nature in the following statement, articulating a compelling argument against reform environmentalism and recalling some of the themes covered in this thesis:

Reformers who would treat the campaign against environmental and human degradation solely in terms of improved technological facilities . . . see only a small part of the problem. Nothing less than a profound re-orientation of our vaunted technological "way of life" will save this planet from becoming a lifeless desert. And without such a wide-ranging preliminary alteration of personal desires, habits, and ideals the necessary physical measures for mankind's protection . . . cannot conceivably be carried out. . . .

For its effective salvation mankind will need to undergo something like a spontaneous religious conversion: one that will replace the mechanical world picture with an organic world picture, and give to the human personality, as the highest known manifestation of life, the precedence it now gives to its machines and computers. . . . (Of only one thing we may be confident. If mankind is to escape its programmed self extinction the God who saves us will not descend from the machine: he will rise up again in the human soul. . . .

. . . In so far as the universal religions . . . have had some sense of the all-enveloping cosmic process as more significant than anything that is immediately visible and intelligible on the stage, they have a firmer hold on reality than those delimited, factual descriptions that remain unaware of the wonder and mystery of the whole performance. (1970, pp. 413, 415; quoted in Hatcher, 1977, p. 21)

If Mumford is correct in his assessment, the transformation needed to heal the ills plaguing human civilization not only will require a return to a pre- or non-Enlightenment view of the universe, that is, an organic rather than mechanical conception, but also will result in and depend on a spiritual or moral transformation within each individual. The changes required to heal the planet are intrinsically human. To develop strategies to deal with the problems in our external environment, human beings must develop the qualities that sustain us as human beings and enable us to transcend the limits of nature, to recognize and to fulfill our individual and collective responsibilities, and to achieve our ultimate potential as guardians of each other and our home. Given the legacy created by the incomplete understanding of the pursuit of truth both by religion and science, until harmony is re-achieved between these two interwoven streams of human endeavour, such a vision will remain unattainable.

One of the major obstacles to achieving this harmony has been the assertion by both sides of exclusive strangleholds on the "correct" answers. However, as we have learned from science, knowledge is relative. In fact, one of the most important contributions to science is Heisenberg's "uncertainty" principle. A full understanding of this principle should result in a feeling of humility on the part of anyone pursuing truth in whatever field they are engaged.⁹⁹ One scholar has elaborated on this point in his argument regarding God's existence. Beginning with a recognition of the fact that there is always a possibility that we may be wrong about something, mathematician William Hatcher disputes the tendency by many scientists and materialist philosophers to view contemporary scientific discoveries as proof that God does not exist. He assesses such claims as "foolish and ridiculous in the light of the universally recognized relativity of

⁹⁹ Mary Clark quotes *Limits to Growth* author Donella Meadows on the implications of human intellectual limitations: "We know very much less than we think we know. . . . After years of constructing little worlds on the computers, worlds in which we know all the rules because we have made them, we have learned the severe limitations of the human mind to understand the behavior of any system with more than three species in it, or more than two interacting economic markets, or more than one renewable resource. In short, our minds are unable to simulate any systems we are really interested in" (1989, p. 206). See also note 92 above.

scientific conclusions, and especially as no scientist or scientific discipline has ever claimed to have undertaken a systematic, scientific study of the question of God's existence and come up with the carefully validated conclusion that there is no God" (1977, p. 20). If 20th-century science and the "modern" scientific method do not possess all the answers and practitioners of some institutionalized religions refute scientific evidence that does not reinforce their interpretations of religious scripture, where do we find the truth?

To answer that question requires an integration of one of the principles that was outlined in Chapter 1 of this thesis and the principle that this section is investigating: the independent investigation of truth and the inherent harmony of science and religion. Each individual who is not afflicted with a mental disability has the capacity, if given the opportunity to develop the skills, to apply the rational faculties with which human beings are endowed to investigate and to analyze the world and all its mysteries. If one accepts that science and religion *in their purest forms* are not contradictory, but rather, mutually reinforce each other, then the balanced application of one's heart, mind, and soul to pursue knowledge will reveal the truth. When reading religious scriptures, one should feel free to question the logic in what is written. Does it reflect scientific knowledge or require a leap of faith? Do representatives of religious organizations promote or undermine basic human values? When studying a particular scientific theory, one should analyze its contribution to the ongoing pursuit of knowledge. Does it reflect and support cherished religious and moral values that have sustained human existence for millennia and, therefore, complement religious teachings? Or is it being promoted as an attempt to reinforce a particular prejudice or activity? False uses of both science and religion in the past have done remarkable damage to both endeavours, jeopardizing humanity's ongoing pursuit of knowledge and attempts to solve the problems that currently foster fragmentation and disunity.

The environmental crisis is, of course, a massive part of those problems and the reason this thesis has been written. The discussion to this point has revealed a wide variety of themes and viewpoints to be considered in addressing environmental issues. As demonstrated in Chapter 4, there are many approaches to dealing with these problems, some of which are more constructive than others. Some are derived from the secular side of Western society, others have more explicit religious roots. This chapter has highlighted several principles that are revealed when some of these approaches are analyzed for their moral and spiritual content. The discussion has also offered an epistemological vision that integrates religious and scientifically based philosophies. Throughout the thesis there have also been revealed many individuals whose work offers inspiration to the current generation of scholars seeking effective and sustainable solutions to contemporary problems. The final offering in this chapter presents a conceptual framework or moral principle for integrating the diversity of viewpoints that exist in dealing not only with the natural environment but also with all of humanity.

Unity in Diversity: Acceptance and Integration in an Era of Intolerance and Fragmentation

... the best hope of humankind is to maintain as rich a diversity of social types as possible, with the expectation that each of these experiments in the human future will cross-fertilise with others, and thus maintain the vital diversity essential for indefinite survival. . . . Competition for ascendancy in world trade, power, or military might are simply empty, meaningless concepts for the future. By encouraging diversity elsewhere, each society ensures a rich source of ideas and techniques for its own future.

— Mary Clark

The remarkable compatibility between all fields of science, whether they deal with inanimate objects or with living things has implications that affect deeply the culture of our times. The validity of these implications is supported by the fact that the various scientific disciplines strengthen each other when, perchance, they can establish contact. Despite the immense diversity of creation, we all accept that there exists in nature a profound underlying unity. The search for this unity provides the motivation for the lives of many different men—some who, like Einstein, search for it in general natural laws and others who, like Teilhard de Chardin, would trace cosmic evolution to a divine origin.

— René Dubos

The use of the phrase “unity in diversity” and similar concepts is not a new phenomenon. Its roots reach back hundreds of years in non-Western cultures such as indigenous peoples in North America and Taoist societies in 400–500 B.C. In premodern Western culture it has been implicit in the organic conceptions of the universe that have been manifest since the ancient Greek and Roman civilizations through medieval Europe and into the Romantic era.¹⁰⁰ In contemporary times, the phrase has been used in a variety of areas including a bibliography of libertarian publications and an interdisciplinary academic symposium, in which the following articulations of the concept appeared:

Unity in diversity is the highest possible attainment of a civilization, a testimony to the most noble possibilities of the human race. This attainment is made possible through passionate concern for choice, in an atmosphere of social trust. (Michael Novak, epigraph opening *Unity in Diversity: An Index to the Publications of Conservative and Libertarian Institutions* [1983])

... the disparate experiences of practitioners of various disciplines studying man as a social being, even when they do not have a common measure or a commonly stated objective, nevertheless share a unity of intent in understanding man in his social context—a unity that over time will lead to greater integrative approaches. Indeed, the technological imperatives of the end of the twentieth century demand an integrative approach to man’s myriad undertakings, demand a Renaissance approach, one whereby the human mind can transcend the fragmented understanding of the parts that the explosion of knowledge and its collection has fostered. Whether this will be a systems approach, such as General System Theory, or an integration of different modes of consciousness, or something else, or a convergence and integration of some or all of these, we do not know. What we do know is that the search must go on. (Introduction to *Unity in Diversity: The Proceedings of the Interdisciplinary Research Seminar at Wilfrid Laurier University* [1980])

The most profound use of the concept has developed over the last 150 years as an integral aspect of an ecological understanding of the world and, to that end, it appears most frequently now in literature promoting that vision. Outside the natural and social sciences and humanities literature that draws from ecology, the concept appears in a well articulated form in only one other place that I was able to discover in the research for this thesis, the Bahá’í writings. It is interesting to note that the origins of the Bahá’í Faith coincide almost to the year with the roots of ecology although none of the original

100 In *Science and Human Values*, Jacob Bronowski cites Romantic poet Samuel Taylor Coleridge’s definition of beauty: “unity in variety” (1965, p. 16)

members of either "movement" had any earthly connection with each other.¹⁰¹ The parallels in the development of both movements are also interesting to note in that they both continue to emerge from obscurity in their respective domains, gaining recognition and respect as they effectively and constructively respond to the challenges that face them.

The ecological context of the concept is based on the scientifically derived knowledge that biological diversity is necessary to sustain the healthy existence of ecosystems and that the healthy progress of the planet is dependent on a diversity of such ecosystems. Natural scientists and environmentalists lament the loss of species that will never be discovered because the environments in which they live are being destroyed by massive transformations such as deliberate burning of rainforests to release more arable land. In other cases, the environments are so sensitive that even minor changes result in unforeseen consequences such as the extinction of some species. The long-term consequences of the escalating loss of species diversity is unknown at this time. Efforts are underway at all scales of human endeavour to deal with the problem, the most recent global event being the drafting of the Biodiversity Convention at the Earth Summit.

This ecological foundation for the concept of unity in diversity has given rise to its use by movements such as social ecology, ecofeminism, and organizations based on Native principles, as was discussed in Chapter 4. It has also been used as a moral foundation for harmony between some of these movements. In summing up the historical conflict between social and deep ecologists, Steve Chase writes, "Unity-in-diversity is a basic attribute of healthy eco-communities. Why shouldn't it be a healthy characteristic for the radical ecology movement?" (in Bookchin and Foreman, 1991, p. 10). As indicated in Chapter 4 and as will become more evident shortly, the concept finds its most profound application in human relationships. For feminism in general and

101. The term "ecology" was coined in 1858 as *Ökologie* by German biologist Ernst Heinrich Haeckel. Thoreau used the term in English in his later writings. The Baha'i Faith was officially "formed" in 1863 when, in a garden outside Baghdad, Baha'u'llah confirmed to his followers that he was "the Promised One" foretold in the previous religious dispensations.

ecofeminism in particular, the concept represents a means to unite the diversity of women's voices around the world, drawing on their cultural and geographical distinctions, and finding common ground in their experience as women. The concept could also find expression in current attempts by Natives in North America to acquire self-governance, drawing on their common experience since European settlement and the diverse expressions of their cultural traditions to provide richness in a new social environment. Bookchin has articulated one of the central aims of radical ecology as a social force in contemporary society:

... one of the tasks of the radical ecology movement is to articulate a *general* human interest that transcends the real but particularistic interests of class, nationality, ethnicity, and gender in order to build alliances to reconstruct our communities along more humane and ecological lines. Yet we need to be wary of talking too glibly about the general human interest. Multiculturalism must mean more than mistaking the currently dominant culture as the universal and expecting other people to adopt the perspective of this dominant culture. (Bookchin and Foreman, 1991, pp. 102-3)

Bookchin makes a crucial point here, that is, the fear that many "minority" groups have of becoming subsumed within a dominant culture characterized by white, male values. It is this fear also within contemporary Western society that has given rise to the notion of "political correctness," a phenomenon that threatens to increase the fragmentation in society despite its attempts to foster awareness of and sensitivity to difference. A healthy and constructive articulation of the concept of unity is needed to erase those fears and mend the rifts that have developed. The concept must incorporate a set of principles that is universally applicable to all human beings simply because they are human at the same time that it provides protection for the diversity of characteristics that maintains the vibrancy of the human species.

Unity without Uniformity

To establish a universally recognized concept of unity, there is need for an acceptance that universal principles exist. These principles are reflected in values that apply to each and every human being. These principles

lie at the core of all the major religions and our most noble cultural traditions. The values of universal brotherhood, love for one's neighbour, and the golden rule of treating others as we ourselves would wish to be treated are just some of the ideals that are common to all cultures. They have fostered social union and amity between people for countless generations, inspired great works of art, and continue to underscore our highest aspirations. Today's world would indeed benefit from a profound affirmation of these essential spiritual truths. (Laszlo, 1989, pp. 104-5)

To Laszlo, the application of these values requires

rising above the religious dogmas, political ideologies and national allegiances which bitterly divide the world. It entails restating the fundamental truths that lie behind all religions, philosophies and traditions. Consideration of these values . . . leads us to recognize the oneness of the entire human species, an ideal that extends former loyalties and does not abrogate them. (p. 105)

If we accept this philosophical foundation for the application of unity, traditional rivalries and vendettas must be forgotten, divisive theories and ideologies submerged, and national borders transcended. The interdependence implied by the notion of the oneness of humanity requires a relinquishing of any idea or activity that allows for the suffering of even one person. If we are interdependent, then the suffering of one affects us all. When a person receives an injury to one part of the body, the entire system of that person is affected as the body attempts to heal itself. If the injury is severe, the whole body, not just the affected part, becomes debilitated. The treatment in that situation is multifaceted. Not only is the injured area treated with specific remedies but the whole body also receives the benefit of nutrients that are provided to assist in the healing. Human beings have not yet learned how to apply this concept of healing to the planet or to the human species itself.

To carry the organic analogy one step further, each component of the body performs an essential and specific function, without which the entire body is handicapped. As mentioned in Chapter 1, each human being possesses talents and the capacity, when given the opportunity, to acquire skills that contribute to the ongoing progress and development of the species. Those talents and capacities ideally contribute to the richness of the human community as each individual expresses herself or himself freely and harmoniously with others. However, humanity has developed institutions and systems

that inhibit the optimal function of each individual in the collectivity. Because we possess ingenuity and creativity, humans have developed coping mechanisms that have obscured not only the hidden damage caused by ignoring certain fundamental characteristics of the human species but also the direct causal connections between our efforts to "improve" human existence and the devastation wreaked by such "improvements."

As long as human beings in any part of the planet are inhibited from developing their individual potential the entire species will remain handicapped. True unity will be achieved when each individual becomes an active and functioning participant in the whole, performing the skills they possess as constructive and productive contributors to their local, regional, and global community. This goal can be accomplished if a balance between the physical and spiritual dimensions of human existence is achieved, enabling productive contributions to human society to be offered as service to the ongoing progress and development of the world without fear of exploitation and oppression.

The Bahá'í writings offer many beautiful analogies to express a vision of unity that is characterized by diversity rather than uniformity. 'Abdu'l-Bahá offers this description of a flower garden to illustrate the concept:

As difference in degree of capacity exists among human souls, as difference in capability is found, therefore, individualities will differ one from another. But in reality this is a reason for unity and not for discord and enmity. If the flowers of a garden were all of one color, the effect would be monotonous to the eye; but if the colors are variegated, it is most pleasing and wonderful. The difference in adornment of color and capacity of reflection among the flowers gives the garden its beauty and charm. Therefore, although we are of different individualities, . . . let us strive like flowers of the same divine garden to live together in harmony. Even though each soul has its own individual perfume and color, all are reflecting the same light, all contributing fragrance to the same breeze which blows through the garden, all continuing to grow in complete harmony and accord. (1982, p. 24)

The light that we all reflect is the spiritual foundation for the concept of unity that is expressed in this thesis. It manifests the source of all creation, the qualities latent within each creature, including humans, that reflect those of the Creator. This aspect of creation was discussed in more detail earlier in the sections on the Native and Bahá'í attitudes to nature. It is also beginning to be perceived and expressed by participants in the deep

ecology, ecofeminist, and bioregional movements. This passage from the Bahá'í writings also alludes to the differences within the human community, emphasizing that this diversity should be a reason for unity rather than discord, a vision that in the contemporary post-modern ideological environment requires further elaboration.

Diversity without Fragmentation

The growing interdependence of the communities of the world over the last century or two has resulted in an increasingly interwoven and complex system of relations. The growth of the Western hegemony that has coincided with the development of that interdependence threatens to impose a uniform set of ideals and values directly and indirectly on all the peoples of the world. Notions of "the good life" are increasingly viewed as synonymous with the possession of consumer "goods" from the West rather than the Judeo-Christian and Enlightenment morals and values that in varying degrees shape Western society.

As a result of the increasing dominance of the trappings of Western civilization throughout the world, endeavours to promote cultural diversity have become more vociferous in the last half of this century. As the traditional lifestyles of indigenous communities across the globe become disrupted, efforts have been made to preserve those cultures in various ways. In contrast to the "melting pot" approach of the United States, some Western countries like Canada express their commitment to the preservation of multiculturalism through open immigration policies and the fostering of community-based events and organizations that enable participants to continue many of the practices that are unique to their culture. One scholar has expressed the ethic in this way:

the presence of cultural diversity, with the constant exchanging, through travel, trade, intermarriage and so on, of cultural traits, offers humankind a rich source of new adaptive possibilities for cultural evolution to meet changing conditions in the future. . . .

. . . Preservation of cultural diversity, far from being perceived as a threat to human survival owing to rivalries and differences, needs rather to be respected and fostered by all cultures. Our global goal must not be simply tolerance of diversity, but its positive

nurturing. Each culture represents an important, perhaps crucial, experiment in the unfolding drama of human life on Earth. (Clark, 1989, p. 477)

Multicultural events provide opportunities for members of different communities to learn more about each other, thus fostering increased awareness and understanding of the diversity within the human community.

The increased visibility and promotion of cultural diversity has been accompanied by stronger feelings of attachment to ethnic roots, often causing conflicts among and within different groups. When the open acceptance of diversity is perceived as a threat to the preservation of one's own traditions, tension develops and conflicts arise. In Canada, this issue has been evident recently with the debate in the Canadian Legion over the issue of headwear, with schisms developing within the organization itself over whether Sikhs should be allowed to wear their turbans inside the Legion halls. This kind of clash over the meaning of a specific cultural trait can give rise to much more serious conflict if not dealt with in an understanding and tolerant manner. In this particular case, long time members of the Legion view their own tradition of showing respect for those who gave their lives for their country by removing their hats when they are inside the halls as being ignored by the Sikhs who view their headgear as much more than a hat, the removal of which is a violation of their religious beliefs. The sustained potential for conflict at an individual or community level despite efforts to promote tolerance at a national level is a reflection of the rigid and often blind attachment to certain traditions that can impede the climate of tolerance necessary for unity.

When disharmony among individuals arises as a result of adherence to traditional expressions of culture (including religion), perhaps it is time to examine those traditions in light of a changing world. Perhaps a re-examination of a certain cultural practice will reveal the reason it was developed in the first place many decades if not centuries ago and offer a resolution to contemporary conflicts. Such an analysis will reveal *why* cultural

traits are so important to the members of that group and *what* makes culture such a powerful aspect of human existence:

Each person, in order to retain those attributes we recognise as human, must live in relation to others, within a social context, a culture which gives meaning to individual existence. This need for cultural meaning is at once the *sine qua non* of human existence and the source of our greatest danger. . . .

It is apparent that people everywhere, as they struggle to adjust their traditional worldviews to meet changing circumstances, must take care that they do not throw out the "baby" of cultural meaning and bondedness with the "bath water" of maladaptive institutions, lest they end up with new institutions that are destructive of the human psyche itself. (Clark, 1989, pp. 474-75)

As mentioned in Chapter 1, religion, as the most powerful of cultural expressions, is also the greatest source of conflict. If it continues to be a source of disharmony among human beings, the planet would certainly be better off without it. However, religion continues to be a powerful force in human existence; it is destined to endure in one form or another. Therefore, an even more intensive examination of religion might be necessary to reveal the sources of the tensions between different religious groups. It is just possible that the evidence will offer not only a resolution to the problems that continue to perpetuate the fragmentation within and between national communities but also a source of inspiration to unite the global family through guidance for each individual at the interpersonal and community levels. This release of guidance and inspiration has the potential to have a massive impact on every aspect of human activity, a possibility that brings the discussion back to the basic focus of this thesis, the environmental crisis.

Unity in Diversity: Environmental and Human Applications

In the issues dealt with throughout this thesis and especially in the evidence offered in the last two chapters, the message is clear when it comes to the geographic scale of human awareness of and action to deal with the environmental crisis. Not only must we learn how to think globally and act locally (the ubiquitous slogan coined by René Dubos) but we must also learn how to think globally and locally and act globally and locally.

This ethic of thinking and acting has profound geographical, ecological, social, philosophical, and spiritual implications. During most of recent human history, the primary way in which regions have been perceived has been derived from the political boundaries that have been established. However, as ecological awareness has developed, there is an increasing perception of the difficulties posed by such often arbitrary determinations of territory. Research in both the action-oriented and philosophical streams of environmental studies is resulting in increased knowledge relating to the physical foundations of human existence and the impacts of human attitudes and activities on the planet. The heightened awareness of and sensitivity to the ecological factors of the human–environment relationship reveal the need to broaden our concept of territory beyond the politically created boundaries that currently denote the international social and economic climate. By adopting scales of attention that reflect the bio- and geophysical factors that shape the earth, human beings will recapture their connection with their natural roots. By learning more about their local environment and how it connects with the biosphere, human beings will not only increase their sensitivity to and understanding of the immediate factors that influence their lives but also heighten their sense of interdependence with the global community of which we are all an integral part. The diversity of ecosystems that makes up the planet is the physical foundation for the diversity of cultural groups that have evolved in those regions throughout human history. Increased knowledge of those groups will also heighten our awareness of the interconnections between human and nonhuman nature.

However, focussing on the natural environment as the source of unity for the human family is not sufficient. There are many other factors that need to be considered. Human beings are complex creatures whose psyche is profoundly affected by more than just our connections with nature. Attention must be paid to how the knowledge gained from studying human interactions with nature affects human interactions with each other. If humanity is ever to find peace with itself, it will come from a massive transformation in

the way humans relate to one another both individually at the family and local community level and in terms of the national and international institutions that are developed to organize broader scales of human interaction. The moral foundations for such relations are deeply rooted in human history in the inspirations for the religious and cultural traditions that provide meaning for the billions of people who share the planet. Unity will be found in the development of broader understanding and acceptance of the diversity in the human family and in the fostering of the basic principles that sustain healthy interpersonal relations.

Chapter 6

Getting Past “Just Words”

. . . we must provide a curriculum aimed not at producing more technicians, more engineers, more mathematicians, more scientists, but at producing more whole men and women, at home in every part of the environment.

Lewis Mumford

We do not need a miracle. We need a concerted *will* to alter our own destiny. We need to cooperate with Life itself in getting over the ugly bump which our technological civilization has created, ostensibly to further progress.

Henryk Skolimowski

By analyzing environmental ethics, geography, cultural history, and other fields in the social and natural sciences and the humanities, this thesis has presented a framework by which scholars in many fields might further their own pursuits of constructive and sustainable solutions to the environmental crisis. By integrating themes and concepts from many academic fields, this thesis has demonstrated that there is sufficient unity to deal effectively with the problems that have arisen as a result of Western civilization's increasing alienation from its natural roots. It has also emphasized the spiritual foundations of and implications for this alienation, offering a vision that, in contrast to the depressing pronouncements of some people, is optimistic *and* realistic. By doing so, this work contributes to those approaches to scholarship that recognize the potential disaster associated with prophecies of doom becoming a self fulfilled reality. One scholar offers this graphic image of hand wringing pessimists:

The atrophy of positive images of the future constrains the creative adaptability of societies. People still prefer the acrobatic feat of reading the handwriting on the wall while their backs are up against it, to conscious and concentrated forward planning to attain a future that is both sustainable and desirable. (Laszlo, 1989, p. 65)

These concluding pages offer suggestions for how the ideas presented in this thesis might be applied by scholars in many academic fields. However, the message is specifically directed at geographers, who, based on the traditions and mandate of their discipline, have a valuable contribution to make should they take up the challenge at a broader scale than that applied at the present time. This conclusion recalls the voids perceived in contributions to geographic research that were discussed in the introduction. Beginning with Relph's perception that geographers writing about post-modernism have neglected the environment in their analysis, this conclusion reviews how the thesis has responded to the perceived voids and offers suggestions for future research.

Geography, Environmentalism, and Post-Modernism

This thesis has offered one conceptual framework for responding to the questions posed by Relph regarding universal grounds for environmental strategies by suggesting that the concept of unity in diversity be used as a way of seeking and building upon common ground among the various endeavours in which human beings are engaged. Scholars in environmental ethics appear to be converging in several fundamental areas, offering ways by which principles such as interdependence, justice, equity, balance, and moderation might be applied in human relations with the natural environment. These principles could become the "firm" and "universal" grounds upon which might be based the "corrective strategies" that are required to deal with not only the global problems to which Relph refers but also local problems such as the location of hazardous waste facilities, implementation of tougher legislation to deal with industrial polluters, and support for alternatives to the mall-based consumer market.

Cosgrove (1990) and Bordessa (1993) articulate visions of postmodernism that address the inadequacies of the modernist ethic that have been revealed most effectively by the feminist critique. For Bordessa, if postmodernism is to be truly revolutionary, "we must enter the moral domain and reconstitute the moral relationship between nature

and culture. By this argument, postmodernity is most importantly a moral revolution founded on a fundamentally geographical reconstruction of the essential enabling conditions of life" (1993, p. 149). By analyzing various environmental philosophies in a geographical context, this thesis has explicitly addressed Relph's and Bordessa's concerns, highlighting those approaches and the aspects within them that offer the most potential for future constructive contributions. There is no epistemological reason that geographers cannot become more visible in this debate, and indeed, they must do so, explicitly incorporating ethical considerations in their analysis.

Geographers involved in resource development and use, environmental impact assessment, sustainable development, urban and rural planning, gender studies, environmental history, geopolitics, and political economy (among others) could enrich their work by integrating a deeper understanding of the ethical foundations of their research and conclusions into their published work. By informing themselves on the ways in which post-modernism is articulated in various fields, they might gain a better understanding of how the current ideological climate is shaping geography, academia, and indeed, all of society. The end result of this more holistic and comprehensive approach could educate a questioning public on what exactly geographers do by reinforcing the relevance of geographical enquiry to current problems and concerns.

Reclaiming the High Ground

Inextricably linked to the incorporation of ethical considerations in geographers' analysis of postmodernism and environmental issues, is what Stoddart refers to as the "high ground," those big questions that have become of less concern in geography as it has wrestled with the quantitative revolution that had such a profound impact a few decades ago. Humanistic geographers are part of the counter revolution that reminds geographers of *why* we do what we do in the first place. This engagement with the ethical foundations of our work as geographers is also articulated by Reed and Slaymaker in

their reminder that, unless geographers explicitly incorporate ethical issues into their discussions of sustainable development, their voices "will (and should) remain muted."

This thesis has revealed the efforts of many geographers in the past who seem to have had a better grasp on the "daring questions" about the human-land interaction than do contemporary geographers despite the increased body of knowledge that has been produced in the last century. Geographers lost an opportunity to deal much more concretely with the breadth of the human-environment interface when environmental studies emerged as an interdisciplinary endeavour in recent years. In an era of fierce competition for research funding, geographers run the risk of being nudged completely out of the picture unless they renew the mandate established decades ago to investigate and analyze the complexities of human activity both in terms of its impact on the land and in human individual and collective responses to changes in the environment.

The interdisciplinary nature of this thesis highlights the potential for more cooperative endeavours with scholars from other disciplines, building on the tradition begun with the "Man's Role" symposium in the 1950s, to offer constructive solutions to the current crises afflicting the planet and its inhabitants. Such interdisciplinary cooperation among diverse scholars concerned with similar issues can only broaden the knowledge base upon which sustainable and viable programs can be built. The values that underlie all human behaviour will play a large role in shaping the solutions to our problems. Building on geography's mandate by more explicitly addressing the ethical issues underlying the human-environment interface will strengthen the effort.

Recapturing the Mystic

The final void this thesis has addressed is that revealed by Peter Gould in his exhortation to geographers to allow themselves to reflect on the mysteries of existence and the mystical elements of scholarship. Other than a small faction of geographers who explore the geography of religion and a few humanistic endeavours that offer impassioned

analyses of aesthetics in the landscape, there have been very few forays by geographers into such explorations. The recent work of David Matless has revealed that such a pursuit is not unprecedented in geographic history and that those who have made an effort created works which capture a sense of spirituality in the landscape rivalled only by the most eloquent Romantic poets.

The attention to such works and the approach taken in this thesis is certainly not intended to imply that explorations and expressions of spirituality should become the ardent pursuit of all self-respecting geographers in their professional endeavours. One of the intentions of this thesis has been to reveal the importance of spirituality not only in the lives of individual human beings but also in our relations with the rest of creation. If geographers are going to be involved in the study of the human–environment interface, then we cannot neglect or ignore that aspect of human existence. Just as we must include ethics in our study of sustainable development and other issues relating to humanity's changing role on the face of the earth, so also must we recognize and accept that spirituality is a fundamental aspect of creation, whether we perceive it ourselves or not. Those who are sensitive to that invisible facet of the human experience should not feel pressure to submerge those sensitivities in their professional lives. Such an “angel on Sunday, sinner the rest of the week” approach to life has been a large part of humanity's growing detachment from our natural roots and the profoundly spiritual experiences that are available to us if we allow ourselves to experience them.

Scholars of the religious or spiritual aspects of human experience have usually been attracted or relegated to departments of religion or philosophy in most educational institutions. However, this compartmentalization of academic thought has obscured the fact that within all areas of academia there are individuals whose personal beliefs are based largely on profound religious feelings. The current structure of educational institutions inhibits those scholars from pursuing lines of inquiry that might allow them to integrate their personal worldview with their specialization or to foster professional

research linkages with scholars in other fields. There is a subtle movement in this direction in a few research institutes scattered across North America, but at the present time the transformation of academia to respond to the massive changes underway in society remains stagnant. Efforts of the type undertaken in this thesis represent a break from tradition and offer a model upon which more spiritually informed scholarship might be based. Such an integration of the spiritual and the intellectual aspects of the human experience go a long way toward healing the historical rift between science and religion and enable the pursuit of truth to continue with those two inherently complementary fields of human endeavour applied in concert.

Geographic Research into the 21st Century

If geographers are to develop the fullest potential of the discipline and to contribute constructively to solving the planet's environmental problems, they must build on their integrative skills and strengthen the natural links among academic fields that compartmentalization and specialization have so effectively severed. There will always be a need for specialists in the diverse fields that comprise the social and natural sciences, and geographers have a role to play as humanity transforms its endeavours to foster a more sustainable existence for itself. Because of the inherent multi-faceted and holistic potential within their field, geographers are in a prime position to pursue endeavours that enhance those aspects of geographical enquiry that increase knowledge of the complexity of the human environment interface. To contribute most constructively to the effort to cultivate more sustainable lifestyles, geographers need to build on their rich tradition and engage in cooperative dialogues and consultations with experts in other fields.

This thesis has highlighted a stream of academic endeavour that has great potential to provide the epistemological foundation for more integrative and holistic mechanisms to heal the earth's ills. Every scholar who investigates the nature of human behaviour or the complexity of nature, whether consciously aware of it or not, subsumes within the

academic mandate the questions that are posed and debated in environmental ethics. Geography is very well situated to incorporate an ethically informed concern for the natural environment into its mandate. As demonstrated in Chapter 3, such an approach is not unprecedented in our discipline; however, the increasing severity of the crisis requires an even more explicit inclusion of ethical issues than has taken place in the past. Geographers need to pursue those lines of inquiry that directly address the fundamental aspects of human behaviour, especially as it affects the rest of creation. Several avenues of research are suggested by this thesis.

One avenue is to continue the analysis of bioregionalism begun by geographers James Parsons and Donald Alexander. As mentioned in Chapter 4, bioregionalism has great potential as a foundation for a global environmental ethic that incorporates the concept of unity in diversity as it is expressed in this thesis. Its emphasis on "place" as more than an abstract concept builds upon the contributions of many geographers. It is also an ideal bridge between scientific and spiritually informed approaches to devising ecologically sensitive lifestyles. Geographers would be remiss if they ignored the opportunity to provide bioregionalism with a better understanding of geographical issues and to inject into their own discipline the spiritual and ethical concerns expressed by bioregionalists.

Other research endeavours could pursue the principles identified in Chapter 5, analyzing each concept in more depth than has been possible here, how it contributes to geographical inquiry, and how a geographically informed analysis heightens our understanding of the principle. Such analysis would also contribute to a broader awareness of the inherent interconnections between humans and the rest of nature by posing and attempting to answer questions such as "To what extent are social justice and natural justice synonymous?" "What role does the promotion of and adherence to equity as a first principle in economics play in the achievement of ecological balance?" and "How can greater knowledge of the earth's carrying capacity assist human beings in adopting sustainable lifestyles?" The interconnectedness of each of the six principles

outlined in Chapter 5 and others not discussed in this thesis offers a virtually unlimited foundation for future research. By building on the literature created by political and moral philosophers and theologians and by contributing their own informed perspective to the discussion, social scientists in general and geographers in particular could play a significant role in the establishment of new and more sustainable human systems.

Parting Thoughts

One way in which many of the ideas expressed throughout this thesis and in these concluding pages could be analyzed in more depth is to devise a test for the hypothesis proposed in Chapter 4 derived from the center of Figure 1 and portrayed graphically in the preliminary exploration in Figure 2: The development and environmental ethic toward which humanity is striving is based on an all-encompassing spirituality that includes belief in the Creator as the source of all life and light, and the practical means by which the planet could be managed is based upon that ethic. This thesis has highlighted the first part of the hypothesis, offering a vision of harmony between religion and science and a unifying theoretical framework with the concept of unity in diversity as a means to achieve consensus among many conflicting worldviews.

Examining the second part of the hypothesis presents a challenge since there is not yet a substantial body of evidence upon which to base one's analysis. Through knowledge and further investigation of some of the movements discussed in Chapter 4 and their activities and communities around the world, it would be possible to determine whether such an ethic is feasible and effective. Many scholars in general and Bahá'ís in particular perceive a growing coalition of effort to begin creating the mechanisms for change, and Bahá'ís offer their community as a model for bringing about the unity required to develop a sustainable global society:

An urge towards unity, like a spiritual springtime, struggles to express itself through countless international congresses that bring together people from a vast array of disciplines. . . . [I]t is the real source of the remarkable movement towards ecumenism

by which members of historically antagonistic religions and sects seem irresistibly drawn towards one another. Together with the opposing tendency to warfare and self aggrandizement against which it ceaselessly struggles, the drive towards world unity is one of the dominant, pervasive features of life on the planet during the closing years of the twentieth century.

The experience of the Bahá'í community may be seen as an example of this enlarging unity. It is a community of some three to four million people [in 1994, well over five million and growing steadily] drawn from many nations, cultures, classes and creeds, engaged in a wide range of activities serving the spiritual, social and economic needs of the peoples of many lands. It is a single social organism, representative of the diversity of the human family, conducting its affairs through a system of commonly accepted consultative principles, and cherishing equally all the great outpourings of divine guidance in human history. Its existence is yet another convincing proof of the practicality of its Founder's vision of a united world, another evidence that humanity can live as one global society, equal to whatever challenges its coming of age may entail. If the Bahá'í experience can contribute in whatever measure to reinforcing hope in the unity of the human race, we are happy to offer it as a model of study. (Universal House of Justice, 1986, pp. 12-13)

This passage articulates a vision of global unity unprecedented in the history of human existence. It appears at a time when growing numbers of people from widely diverse streams of life perceive a transformation in perceptions and attitudes that some refer to as a paradigm shift. The growth of environmental ethics as a sub field of philosophy and an adjunct of a diversity of social and natural sciences is one piece of tangible evidence that such a shift is indeed occurring. The burgeoning body of literature on the subject offers a plethora of viewpoints. There are, however, many common themes, several of which have been addressed in this thesis. As the dialogue continues, these themes could provide the foundation for a sustainable global ethic. Social ecologists and ecofeminists offer constructive critiques of the present and positive visions of the future. The trend among many in the deep ecology movement toward a less exclusive, more practical perspective is evidence of progress. The increased attention to more holistic approaches to environmental management and more pragmatic moral philosophies indicates that people are very concerned with the relevance and sustainability of human interactions with each other and the rest of creation. The appearance of bioregionalism as a valid environmental ethic reveals the geographical and ecological foundations of comprehensive moral visions. The spirituality and practices of indigenous

peoples provide an enormous body of knowledge still largely unexplored. The efforts of contemporary ecological humanists, theologians, and members of religious traditions new and old offer the unifying spiritual content that is crucial for a truly sustainable global environmental ethic that responds to every facet of life.

As the third millennium of human history as recorded by the Christian calendar approaches, the enormous task with which human beings are faced both collectively as a species and in our individual lives becomes increasingly evident:

... the human has taken over such extensive control of the life systems of the Earth that the future will be dependent on human decision to an extent never dreamed of in previous times. We are deciding what species will live or perish, we are determining the chemical structure of the soil and the air and the water, we are mapping out the areas of wilderness that will be allowed to function in their own natural modalities.

All of this is filled with risk and presumption, but if there is any way of guiding our course in such difficult decisions, it will be discovered only through an understanding of the most intimate aspects of the natural world. . . . A new mystique is needed, but a mystique associated with the highest level of comprehensive knowledge and critical competence.

This new period in history might be called the *Ecozoic era* to indicate the order of magnitude of the change that is taking place and of the expanded role of the human. For this new biological period to attain any degree of fulfillment will require the integral participation by all members of the planetary community. The bioregions into which the Earth is divided in its geographical structure need to be recognized as the basis for these more integral multi-species communities. . . .

All these changes we envisage as the next phase of the larger story of the universe that is coming to expression not only in our institutions but in our language. Every change in the governing paradigm of human affairs requires an extensive change not only in our sense of reality and value but also in the language whereby we give expression to these concerns. (Swimme and Berry, 1992, p. 4)

And so, at the end of this phase of the exercise, the widely used passage from T. S. Eliot's "Little Gidding" comes to mind: "The end of all our exploring will be to arrive where we started and know the place for the first time." After a survey of the history of human thought regarding our home, after an examination of various environmental philosophies and the spiritual principles upon which they are based, and after an excursion into a concept that has the potential to unify the whole world for the first time in human history, "the end of all our exploring" brings us back to the opening thoughts of the first chapter of this thesis. During the present period of transition, human beings are in the process of reexamining our institutions and the tools (such as language and

epistemology) that we use in those examinations. The process is, and indeed, must be, holistic in its focus. We can no longer simply treat the symptoms as abstract concepts to be examined in isolation, but rather, must seek solutions that address the root and systemic causes of humanity's problems. Some of the discoveries and cures are frightening, penetrating to the depths of human consciousness and requiring a massive transformation of much that is familiar. The solutions, however, could be exhilarating, allowing humanity to scale previously uncharted heights of sublimity. They are ours to discover. Hopefully, some of the ideas presented in this thesis will assist us to move forward. At a personal level, this work represents my first comprehensive effort to plumb the depths of the literature that reflects and inspires human interactions with each other and the rest of creation. At a broader level, it is hoped that this initial foray raises at least as many questions as it answers, spurring others to initiate or continue their own efforts in the never-ending quest for knowledge.

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