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### Table of Contents

ECOLOGY OF RELIGION AND RELIGIOUS ECOLOGY . . . . .	Alan Drengson . . . . .	133
THE TRILOGY OF EXTINCTION . . . . .	Chris Maser . . . . .	135
DENIAL OF DEATH AND ITS EFFECT ON ENVIRONMENTAL DEGRADATION . . . . .	Gust H. Bardy . . . . .	138
HOMO CARCINOMICUS: A LOOK AT PLANETARY ONCOLOGY . . . . .	Frank Forencich . . . . .	142
CLASSICAL AMERICAN PHILOSOPHY AND ENVIRONMENTAL ETHICS . . . . .	Joseph Grange . . . . .	145
THE LOGIC OF ENVIRONMENTALISM . . . . .	Frank Ebersole . . . . .	148
THE PASSIVE VOICE OF SCIENCE: LANGUAGE ABUSE IN THE WILDLIFE PROFESSION . . . . .	Mary Kahn . . . . .	152
REGENDERIZING OTHER ANIMALS AS "SHE" . . . . .	Carol Cina . . . . .	154
THE BIOLOGICAL FALLACY: LIFE = ORGANISMS . . . . .	Stan Rowe . . . . .	158
GAIAN INTEGRITY: A CLARION PRECEPT FOR GLOBAL PRESERVATION . . . . .	Robert L. France . . . . .	159
THE LANGUAGE OF THE ENVIRONMENT . . . . .	David McMullen . . . . .	164
AN ECOLOGY OF STYLE . . . . .	David Berger . . . . .	165
THE VOICE OF THE EARTH: A REVIEW . . . . .	Allen D. Kanner . . . . .	169
THE ENVIRONMENT AND THE ALTERNATIVE PRESS STORIES . . . . .	Joan Gaunt . . . . .	170
ECOFABLE #3: THE LAWS OF THE EARTH . . . . .	Mary de La Valette . . . . .	175
ELEMENTAL DUST . . . . .	Aerin Caley . . . . .	176
THE SWEET TASTE OF VINEGAR . . . . .	Michael Caley . . . . .	177
POETRY . . . . . <i>Drengson, de La Valette, Bruns, Wheeler, Antler</i>		179

## ECOLOGY OF RELIGION AND RELIGIOUS ECOLOGY

Alan Drengson

The "fall-redemption" theology of Christianity, plus the Old Testament imperatives to have dominion over Nature, have been said to be the roots of our environmental crisis. According to one version of this theology, humans are created in the image of God, and Nature is solely for them. Our fall from grace is described in the Old Testament. Redemption is offered in the New. When Jesus of Nazareth is revealed as Christ, the soteriological (from the Greek *soteria*, meaning salvation) structure of Christianity is complete. Humans attain salvation in this life to be reborn in the Kingdom of Heaven, which is not of this world, there to live in eternal bliss with the Lord. If the Genesis story of Adam and Eve tells of our fall from Eden, the resurrection of Jesus as Christ establishes that eternal life is accessible to us. Given this other worldly theology, is it any wonder, some ask, that our Christian civilization would have no compunction about destroying Nature? It is ours to have dominion over, and the purpose of our life

on Earth is so that we have a chance to attain salvation and eternal life.

Primal religions have no such soteriological structure. Religions which do, emerge with the rise of ancient agricultural civilizations which did break with Nature. In primal religions there is no fall. Associated with hunting-gathering peoples, primal religions usually involve shamanism; they are ceremonial and involve communal participation in acts of healing self, tribe and relationships to the world, with ongoing contacts with the spirits of Nature, ancestor spirits, gods and the Creator. Primal religions have no organizational hierarchy, no priestly caste, no patriarchy or matriarchy. Visionary experience in ceremonial settings, in lucid dreams, in wilderness wandering, is a necessary part of life. To enter the world of animal spirits, one journeys down into the Earth using, for example, the ceremony and drum as vehicles. By these same means one can journey to the upper

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world of ancestor spirits. Each person's visionary experiences are considered valid for that person, and they enrich the group.

Agricultural civilizations gave rise to new forms of religion. Most of these do exhibit a soteriological structure. The central story of Christianity's soteriological structure can be given an ecological interpretation. Perhaps in understanding it in this way, and in terms of transpersonal processes of ultimate transformation, we can see how it might support a sacred ecology and new idea of progress. First let us consider the whole story in more detail.

Adam and Eve were created by God and dwelt in the perfect Garden of Eden. They had neither toil nor want. All their needs were met. They could eat fruit of all the trees of Eden but one, the tree of knowledge of good and evil. They communicated and lived in harmony with the animals. They were naked, but were unaware of this. They were not aware of differences between themselves and the animals. They lived in perfect harmony with their world, in a primordial unity, lacking self and species awareness. They could not reflect on their condition. They could not see themselves apart from it. They lacked the self reflectiveness necessary to be autonomous moral agents. The serpent (an esoteric symbol, as is the tree of knowledge) tells Adam and Eve that if they eat the forbidden fruit they will gain a knowledge which will make them Godlike. They eat the fruit. When God returns to the Garden, they are ashamed of their nakedness and hide. There is a transformation in consciousness here which marks the emergence of self-awareness and it gives rise to the break with Eden. They must leave the original unity with Nature; this is the cost of self and species awareness. Now they must cultivate plants and domesticate animals. Their lives become difficult, marked by suffering and toil; their thoughts laden with knowledge of their own mortality. Cain and Abel, representing agriculture and pastoralism, come into conflict, as happened historically. The descendants of Adam and Eve are born into this fallen condition as a result of the original fall from Grace.

This ancient myth provides an account of the development of agricultural, historical humans. (It also represents the development of each individual person born into historical culture.) The original human condition is that of paradisiac oneness with Nature (the mother). The fallen condition is one which is unsatisfactory; we are born in suffering and sin; our lives are marked by struggle and conflict; we long to return to the original condition but cannot. Humans lost their innocence in acquiring self-reflexive awareness and knowledge of good and evil.

The New Testament completes the Christian soteriological story; it explains the meaning of the fall into history and also tells of the end of history. The story begins in Genesis and continues throughout the old Testament with the descendants of Adam and Eve living in historical time. Their days are marked by wars, conflicts, conquests, and plagues. History is the fallen life. There seems no way out. Prophets reveal more of God's word and foretell the coming of one who will show the way beyond the limited historical condition. The Gospels teach that history is the turbulent period of transition from Eden to the Kingdom of Heaven. Jesus of Nazareth is revealed as the Christ (anointed one) who is redeemer and savior of souls.

Jesus is baptized in the river by John the Baptist, a man dressed in animal skins living in the wild. This connects Jesus with the primal elements, and the water represents submersion in the divine power of life. Jesus enters his ministry through the baptism. It gives him authority with those who dwell in the

countryside, but so do his acts of healing. His words speak what is in the human heart. He speaks as one who **knows**. And what does he know? He knows how the old teachings and unfinished stories are to be completed. Their completion is exemplified through the life he leads, which he invites others to follow. He says that this is the Way to the Kingdom of Heaven within, which is always at hand. During his ministry he preaches astounding sermons, teaching through parables. In the Sermon on the Mount (in Matthew) he tells us what we must do, if we are to follow his Way. We must not judge others; we must love others as ourselves; we must do good even to those who harm us. He rejects the older retributive view of justice. The essence of the law is stated in two new commandments: Love God and love others. If we do this, and are humble and pray as he taught, then we shall know salvation and the Kingdom of Heaven. From the unsatisfactory condition of struggle and suffering we will be reborn in the life of the spirit, and after death we will join God and Christ in the Kingdom of Heaven for eternal life and bliss. Jesus throws himself on the wheel of history, is crucified and dies; he is entombed, disappears and reappears resurrected, showing the story's truth.

To sketch an ecological interpretation of this story, let's first consider some esoteric meanings of the cross and crucifixion. In our account, the horizontal bar of the cross represents the linear time of history, past, present and future. The vertical bar represents the sacred dimension of the eternal. The vertical is buried in the Earth, but points toward the heavens; the horizontal (or historical) is supported by the divine axis. Jesus, the historical person, has his hands -- the makers of human history -- nailed to the cross. It is the historical person who dies. The divine nature (Christ) does not die, but becomes fully manifest when the historical person is transcended. Thus, the death of the historical person (ego) is a prelude to birth of the Christos (full transpersonal consciousness) as the life of the spirit. The place on the cross where the two bars intersect is the present. It is in our present historical reality, here and now, that we realize and complete ourselves. It is only in and through this present that we gain access to both time and the eternal.

The story of Jesus, then, is the story of human development beyond the fallen condition of historical person or ego self. The historical person is only a small part of what we each are. But we do not realize the other divine side of our nature. Jesus showed us how to realize this larger Self (Christos) which transcends the small self, by sacrificing the historical self (ego).

In the primordial condition of oneness with Nature we lived in the Paradise of blissful ignorance. We were not self aware. To become self-reflective, moral agents we had to lose this innocence and gain knowledge of good and evil (the ability to make cognitive distinctions). This acquisition of knowledge also involved a separation from Nature (species awareness) and from each other (self and other). This is a fallen condition if we are no longer aware of our divine, larger Self. We might believe we have it, but we do not **know** this. We are preoccupied with getting and spending and are alienated from Nature and do not see its divinity. The Savior, baptized in the essence of life, knows the ultimate truth of this Divine nature. He reveals this to us by living through the historical cycle. He becomes a fully integrated, whole person. He teaches that our historical self is part of a larger ahistorical Self which transcends our historical personae (literally "masks"). Only by transcending these can we be

born in the timeless life of the spirit. There is an interdependence between the historical and the eternal. The Christos represents the complete realization of divine love and wisdom as the historical ego is transcended in the reality of our present lives. We must each find the Christos (transpersonal consciousness) in our own lives here and now. That consciousness (which completes us) is not in the distant future, and not something that will be done for us. Its realization is the mission each of us faces if we are to complete our own human journey. With the transpersonal phase development is completed, life goes on, but now suffused with the qualities of heavenly consciousness (blissful, joyful, compassionate, etc.) on Earth.

The earliest stage of human consciousness is the prepersonal condition of reactive sentient awareness that is not self reflexive. From this sentient awareness self-reflexive awareness emerges through a series of separations, identifications, disidentifications, and expanded identifications. We eventually become our own persons capable of directing our own lives. We achieve full self-awareness, an integrated self, and are able to act deliberately. We are aware that we know and that we don't know. We are able to consider our options, make decisions, apply concepts and make judgements. We can reflect on our lives and their meanings. This reflective process leads us to realize our tenuous condition, poised as we are between the present and eternity. We long and aspire to escape this sense of conditioned existence and incompleteness. We wish to know eternity and unalloyed bliss. We wish to know ultimate reality. But we look for it in the wrong places. We pursue it through power, pleasure, fame and wealth, or by tripping out on abstract theories and other worldly promises, and destroy Nature in the process. These pursuits are all empty and ephemeral.

There are moments in our lives, however, when we seem to connect with a larger reality, a reality not of linear time, the reality of the eternal within which the present is enclosed. We develop from the prepersonal to the personal and aspire to the transpersonal. We do not want to go back to the mere sentient

primordial unity, but on to the transpersonal consciousness and unity in difference. This involves the extension of identification beyond the personal to the larger ecological Self. Our conscious personal self as reflective ego is set between the deep ecological unconscious and the larger ecological Self. Through a spiritual discipline (the way of nonjudgmental awareness and compassionate love) we come to realize the larger transpersonal consciousness, the Christos, which transcends personality.

The interpretation of the Christian soteriological story suggested here coheres with Christ's celebratory remarks about Nature and the Creator's love for all beings. It helps us appreciate how the teachings of Jesus lend support to the Creation Theology of Matthew Fox. They are echoed in the love of Nature expressed in St. Francis' poems and prayers.

The significance of history is that it enables us to realize our divine nature **in the present historical reality** through perfection of ourselves as moral beings, and thereby to understand our interconnections with all creation. This work and realization is the meaning of life. We can live each moment in the fullness of time and eternity. We call this "living the sacred or religious ecology." It is the historical ego which fears death, but here its dying is seen as part of the process of ultimate transformation from the limited condition of linear time, to the limitless ground of possibilities found in the eternal dimension of the present. This releases the person as historical self from the fallen condition. Modern consciousness is fallen and alienated, for it has lost access to the deep ecological subconscious and does not know how to expand into the transpersonal, ecological Self. Transpersonal consciousness is aware and responsive to the many communities with which we are reciprocally interrelated. It is fully ecosophic. For it, progress is a moral and spiritual undertaking within the reality of the total present. It is here that self-transcending meaning is found. It is here that we realize our larger and deeper Selves, in the ongoing life of the larger world. And this is the heavenly kingdom on Earth-Gaia.

## THE TRILOGY OF EXTINCTION

Chris Maser

### Introduction

The "definition" of death, and therefore of life, has come under renewed scrutiny during the last decade or so, as both the biological and the legal implications of transplants of human organs have blurred the distinctions between a "dead" human being and a "live" one.

Over the years, I have learned, as the physicians are learning, that there are many former "verities" that only become more slippery - more mysterious - the more we learn about them and about ourselves. Death is one of these mysteries whose definition eludes me, because my perception of it is always in motion.

Humanity has discussed creation and extinction, life and death at least of itself, for millennia - ever since our first, conscious perception of the horizon beyond life. Over time, the term "extinction" was most often used in discussing the evolution of plants and animals, including human beings. The concept of

extinction seemed fairly simple; it had but one face - a form of life came into being, existed for a time, and then ceased to be. And because people tend to think of time, life, and death as linear - since we seem to have time only once - birth, death, and in between are viewed as discrete points along the linear continuum of time. In this sense, creation is conceived as but a flicker, and extinction is forever.

Extinction, however, is thrusting itself into our consciousness as a much more complicated matter than heretofore assumed. From today forward, the many faces of extinction will become more and more clearly reflected in society's mirror as contemporary Americans are forced to recognize their society's purposefully-caused extinctions of both species and ecological processes in the name of short-term economic/political expediency.

The ominous reflections of these extinctions are signalling the creation of a world in which society as we know it is in imminent

danger not only of forming the "Museum of Extinctions" but also of becoming its curator. Unless we reverse the growing problem of global pollution, we are dooming ourselves as a species to the selfsame museum.

In this paper, I am going into the Cosmic house of mirrors to seek reflections of the infinitely-varied faces of extinction. I find in the house of mirrors very few clearly-drawn lines of agreement between words and concepts. Although you may feel such fuzziness to be disturbing, the more I explore the world of meaning the more I find that every opposite is but the other side of itself and that opposition is merely a point of view - **not a point of fact.**

With the above in mind, let's consider why someone would willingly, purposefully create the extinction of any species or ecological process in the first place. Then we'll examine the "trilogy of extinction," which begins with **intellectually-created extinction**, the process of economic planning, which leads to the **economics of extinction**, the exploitation of resources for short-term, economic gain regardless of the potential, long-term, ecological consequences, and is finally completed with the **physically-manifested extinction** of both species and ecological processes.

### Purposefully-created Extinction

George Horace Latimer wrote: "It's good to have money and the things that money can buy, but it is good [also] to check up once in a while and make sure you haven't lost the things that money can't buy."

Despite Latimer's admonishment, we are today in an accelerated process of losing many things that "money can't buy," such as our spirituality, the quality and liveability of our environment, our dignity as human beings, and more and more fellow travellers on our planetary home in space. Such losses come about because we have become progressively linear and materialistic in our view of the world and in our measures of success. We have accomplished all of this through the introduction into human culture and society of economically-oriented, purposefully-created extinction.

The motive behind this introduction is something called "conversion potential." The notion of conversion potential arose out of our Western, linear thinking, which is oriented almost strictly towards the control of Nature and the **conversion** of natural resources into economic commodities, into money - the God of Western materialism. Conversion potential dignifies with a name the erroneous notion that Nature has no intrinsic value and must be converted into money before any value can be assigned. Thus, all of Nature is seen only in terms of its conversion potential. It is this distorted, funhouse-mirror view of Nature that gave birth to the trilogy of extinction.

### Intellectually-created Extinction

The trilogy of extinction begins in the human mind as a tiny worm of blindness, which distorts wholeness into saleable parts and relegates the "leftovers" to the trashbin. Old-growth trees are a case in point.

In Nature's forest, old trees often develop root rot, which so weakens them that they are easily blown over by strong winds. This is how Nature **reinvests biological capital** into the soil, which in turn nurtures and grows the trees of the forest. Such wholesome reinvestment is seen only as "economic waste" in the mirror of our linear, materialistic, human-centered society.

Neither seeing nor understanding the life and processes of a fallen old-growth tree as Nature reinvests it into the soil of the forest floor, economists and people of the timber industry at large continue to seek ways of eliminating such "wasteful loss of woodfiber." To them, trees blown over by the wind just lie on the ground rotting and are "good to nobody."

This notion of economic waste drives the corporate/political planning system to liquidate all possible old-growth trees, because they are thought of simply as "free profit that will be wasted if not cut and used." And there is no plan to ever allow them to grow again; when they are cut, they are gone - not only the large, live tree but also the large snag and the large fallen tree. Thus, "intellectually-created extinction" is the conscious thought, the purposeful plan to eliminate something from a particular area, which all too often makes a potentially-renewable resource into one that is definitely finite.

In addition, the capitalistic notion of getting the absolute, maximum profit out of all resources - be they renewable or nonrenewable, such as fossil fuels - with the absolute, minimum investment not only is used to dictate but also is used to justify the unmitigated, corporate/political exploitation of our home planet. In this vein, it is the purposefully-planned, permanent liquidation of every available old-growth tree, without recompense and without replacement, to feed the corporate/political machine's appetite for free profit that constitutes the "intellectually-created extinction" of the world's old-growth forests.

### The Economics of Extinction

Intellectually-created extinction through the process of economic planning is the precursor of the economics of extinction, which leads to the completion of the trilogy. The economics of extinction has corporate/political greed as its soil and its soul. Thus, the economics of extinction is the epitome of the materialistic, utilitarian view of the world, which totally disregards the sanctity of life and its ecological/spiritual functions.

The motto of the economics of extinction is: **Profit over all!** - even if it means the loss of most of the world's species of plants and animals and the ecological functions they perform. Liquidation pays, even unto the purposeful extinction of a species; conservation costs, and that is unacceptable to profiteers.

The "profit over all" motto is therefore the guiding force in the Pacific Northwest and across Canada; as such, it is used to justify the liquidation of as much of Nature's remaining old-growth forests as is humanly possible. This same motto is then used to justify the conversion of the liquidated forests to economically-designed, crop-like plantations of young trees to be harvested - theoretically at least - over and over and over into the distant future like fields of corn. But trees are only one part of a forest, the only part to which our distorted vision assigns "conversion potential." The rest of the forest is destroyed, its soil impoverished, and its myriad organisms and processes dismissed as useless junk and impediments to the sanctity of the profit margin.

In 1908, President Theodore Roosevelt, concerned about the "profit over all" attitude in general and that of the timber industry in particular, convened the first-ever meeting of all the governors of the states to address the topic of the environment. His opening address to the conference is as pertinent today as it was 83 years ago. He began:

I welcome you to this Conference at the White House. You have come hither at my request, so that we may join together to consider the question of the conservation and use of the great fundamental sources of wealth of this Nation.

So vital is this question, that for the first time in our history the chief executive officers of the States separately, and of the States together forming the Nation, have met to consider it.

This conference on the conservation of natural resources is in effect a meeting of the representatives of all the people of the United States called to consider the weightiest problem now before the Nation; and the occasion for the meeting lies in the fact that the natural resources of our country are in danger of exhaustion if we permit the old wasteful methods of exploiting them longer to continue.

Later in his speech, he said.

Just let me interject one word as to a particular type of folly of which it ought not to be necessary to speak. We stop wasteful cutting of timber; that of course makes a slight shortage at the moment. To avoid that slight shortage at the moment, there are certain people so foolish that they will incur absolute shortage in the future, and they are willing to stop all attempts to conserve the forests, because of course by wastefully using them at the moment we can for a year or two provide against any lack of wood.

He went on to say that

Any right-thinking father earnestly desires and strives to leave his son both an untarnished name and a reasonable equipment for the struggle of life. So this Nation as a whole should earnestly desire and strive to leave the next generation the national honour unstained and the national resources unexhausted.

Even in Roosevelt's time, the trilogy of extinction claimed the hearts and minds of those individuals who sold their souls to the corporate/political machine. Beginning in secret with the hidden, intellectually-created extinction; passing through the hidden, economics of extinction; the trilogy is completed with the visible, manifestation of extinction. Thus are the thoughts of the human mind translated into action against Nature.

### Manifested Extinction

With the liquidation of the old-growth forests, in the Pacific Northwest, for example, there will be no more old trees to stand as living monarchs, to die and stand as large snags, and to topple as large fallen trees and lie for centuries decomposing, providing a kaleidoscope of habitats, and performing their myriad functions as they recycle and reinvest their biological capital into the soil from which they and their compatriots grew. As the trilogy is consummated in the forest, the large snag and the large fallen tree, which are only altered states of the live, old-growth tree, will go the way of the oldest living thing on Earth, the old-growth monarch of the forest - down the economic hall of extinction.

And with the old-growth forest shall go species, such as the northern spotted owl and the marbled murrelet, that have evolved in concert with that particular habitat. In fact, the owl and the murrelet have evolved adaptations to particular features of that habitat.

The owl nests in tall, broken-topped, old-growth Douglas-fir trees. The murrelet - a seabird - nests on carefully-selected, large,

moss-covered branches at least 100 feet up in old-growth trees with other branches close overhead to protect the nest site.

In addition, the nest tree is located several miles inland from the coast. Being so specialized in the selection of their reproductive habitats, neither is capable of adapting to the rapid changes wrought by the liquidation of the old-growth forest.

And now comes an interesting twist to the story. It is not only species that will become extinct with the liquidation of the old-growth forests but also the "grandparent trees." As the old trees are liquidated and replaced by young trees, crop after crop, the ecological functions performed by the old trees become extinct processes, such as creation of the pit-and-mound topography on the floor of the forest with its mixing of mineral soil and organic top soil. Why? Because there are no more grandparent trees to blow over.

Pit refers to the hole left as a tree's roots are pulled from the soil, and mound refers to the soil-laden mass of roots, termed "rootwad," suddenly projected into the air above the floor of the forest. The young trees, with which the grandparent trees are replaced, are much smaller and different in structure than the old trees and can't perform the same functions in the same ways.

For example, of all of the factors that affect the soil of the forest, the microtopography of the surface, particularly the pit and mound topography, is the most striking. The effects of this topography have a major influence on creating and maintaining species richness of the herbaceous understorey and on the success of tree regeneration.

Vegetation may be uprooted or buried by soil as an old tree's roots are pulled from the ground. Falling trees also create opportunities for new plants to become established in the bare mineral soil of the root pit and the mound, and with time, the fallen tree itself presents habitats that can be readily colonized by tree seedlings and other plants. In addition, pit and mound topography is a major factor in mixing the soil of the forest floor as the forest evolves.

The extinction of the grandparent trees changes the entire complexion of the forest through time, just as the function of a chair is changed when the seat is removed. The "roughness" of the floor of the forest, which was a result of the cumulative addition of pits and mounds and of fallen grandparent trees over the centuries, will become transformed to an unprecedented "smoothness" - without pits and mounds, without large fallen trees.

Now the water moves differently over and through the soil, which is devoid of large, fallen trees to act as reservoirs, storing water throughout the heat of the summer, and which held soil in place on steep slopes. Gone are the huge snags and fallen trees that acted as habitats for creatures wild and free. Gone are the stumps of the grandparent trees with their below ground "plumbing systems," which guided rain and melting snow deep into the soil.

This plumbing system of decomposing tree stumps and roots is the frequent formation of hollow, interconnected, surface-to-bedrock channels that rapidly drain water from heavy rains and melting snow. The collapse and plugging of these channels as roots rot completely away, force more water to drain through the soil matrix, reducing soil cohesion and increasing hydraulic pressure, which, in turn, causes mass soil movement. These plumbing systems cannot be replaced by the young trees of plantations.

Suddenly has the artistry and the ecological sustainability of Nature's ancient forest vanished, and with its banishment go the lifestyles of a special breed of logger, log-truck driver, and mill worker - perhaps never to be replaced. Where once stood Nature's mighty forest in the parade of centuries, now stands humanity's pitiful, ecologically-sterile, economic plantation - the epitome of the greed embodied in the corporate/political motto "profit over all." Now is the trilogy of extinction complete.

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About the Author: **Chris Maser** is the author of *The Redesigned Forest*, and *The Forest Primeval*. He is a consultant in sustainable forestry practices and lives in Corvallis, Oregon. This is the final article of a three part series published in *The Trumpeter*.

## DENIAL OF DEATH AND ITS EFFECT ON ENVIRONMENTAL DEGRADATION

Gust H. Bardy

### Introduction

The breadth and depth of environmental problems that confront us staggers the mind. Contamination of aquifers, denudement of topsoil, depletion of oceanic fish, human waste disposal, global warming, heavy metal concentration up the food chain, acid rain, increasing ultraviolet radiation from ozone depletion, depletion of biologic diversity, deforestation, and an exploding human population with 3,000,000,000 people in excess of an ideal number for our planet. If one contemplates the implications and scope of each of these problems, even with modest intensity, the mind is numbed. The problems are towering, personal interest meager, public awareness superficial, and public solutions narrowly focused and at best regionally organized.

It is this writer's opinion that a primary obstacle in solving the many difficult tasks that confront us issues from a failure to realize the human psychological underpinnings behind these many environmental calamities. There is reason to believe that the environmental problems that confront us stem from far deeper motivations than greed, job protection, political ideologies, or any of the usual explanations debated in the press, in the courts, or in environmental organizations.

To argue environmental agendas from the vantage of political ideology or economic pressures ultimately is tangential to a primary unconscious motivator. As such, discussions centering on politics and economics will never halt the ever growing tide of environmental troubles because the root cause remains unaddressed. If we are to mount an effective national and global response to our ecological disasters, an awareness of the powerful yet unconscious forces behind environmental degradation must be revealed.

The purpose of this article is to provide a philosophical base from which to understand and ultimately address the ecological problems of our time. The theme discussed herein is not meant to replace the standard arguments favouring environmental preservation, but rather to provide a broader foundation from which to pursue conservation efforts more effectively.

The central thesis of this discussion is that environmental degradation is a direct consequence of human denial of death. Moreover, this denial of death manifests itself in unconscious, yet culturally acceptable, magical ideation that, in turn, results

in environmental ills, as well as personal, societal and planetary ills. The magical ideation is a complex process of unconscious self-delusion that integrates superficial religious and philosophical concepts with primitive biological imperatives. The result is to cloak our minds and hearts from our most rudimentary fear, that of contemplating our personal extinction.

### A Medical Perspective and Thesis Formation

As an introduction to the origin of my thesis, I believe a review of my professional background is pertinent. As I endeavour to link the practice of medicine to insights into environmental degradation, I ask the reader's forbearance. The connection to medical practice seems tangential at first. However, when one realizes that fear is a central emotion affiliated with illness, especially severe illness, a link is forged. It is this experience with this very palpable fear that revealed to me how constant and fundamental a motivator it is, not only in illness but in health.

My medical discipline is cardiology but most of my efforts are directed to the care of patients with life threatening cardiac rhythm abnormalities. My work is highly focused and narrow in scope. In essence, my medical practice is devoted to preventing the occurrence of a problem called "sudden cardiac death", a disorder that results from a highly chaotic cardiac rhythm abnormality known as ventricular fibrillation. It arises without warning and, with rare exceptions, is instantaneously fatal. Moreover, the victim usually feels fine immediately prior to collapse. The few fortunate survivors of this calamity in the Seattle area often come under my care.

Survivors of ventricular fibrillation are people who have been electrically shocked out of this heart rhythm abnormality by paramedics shortly after its onset. There are few such lucky people. Approximately 250,000-500,000 people succumb to ventricular fibrillation in the United States each year; yet only 2000-3000 will survive to be treated. I personally will see about 30-50 such people each year, a comparatively large number for any one physician. My access to these relatively large patient numbers is a consequence of Seattle's excellent medic system where cardiovascular collapse from ventricular fibrillation can be treated faster than in any other city in the world.



## The Window Into The Human Psyche

In absolute terms, I see a small number of people who survive ventricular fibrillation, but they have provided me an unusual window into the human psyche. Curiously enough, I believe that what I've learned about fear of death from these people has relevance to the environmental problems of our day. Surviving an episode of ventricular fibrillation unveils the human unconscious and the human fear of death with startling clarity.

My interactions with sudden cardiac death survivors coupled to my environmental interests have led me to some conclusions, that if true, might be used to refocus some of our thinking as to why humanity is so callous toward the natural world. To make the association between ventricular fibrillation and environmental degradation, one has to think of ventricular fibrillation as a metaphor for nature. The human response to ventricular fibrillation is much the same as how humans relate in a general way to the non-human, natural world.

To understand the metaphor let us delve into ventricular fibrillation a little more. Almost always, ventricular fibrillation arrives abruptly, without a second of warning. As such, it is difficult for the patient to develop "reasons" for its presence. This is atypical for most human relationships to disease. Typically, patients develop a defense mechanism to cope with disease that establishes blame or guilt for the problem. For example, "I have lung cancer because I have smoked" or "My gallbladder is infected because I'm fat" or "Arthritis runs in the family" or "My emphysema is a result of working 30 years in the mill" or this paralysis is because "I was hit by a car". One way or another it is a natural psychological defense mechanism to rationalize a cause and effect relationship. Disorder, especially bodily disorder, begets a strong drive to instill order, reason, meaning, or blame.

In the case of ventricular fibrillation, one can not easily define a cause and effect relationship. Moreover it is difficult to assign blame or to assume guilt. Furthermore, the usual "Death and Dying" gyrations, initially described by Elizabeth Kubler Ross, of an initial shock reaction followed by a magical attempt to plead and barter out of the health problem followed by anger finally followed by acceptance. This usual psychological staging and rationalization process isn't operative with ventricular fibrillation.

There are two fundamental aspects of the problem of ventricular fibrillation, as it relates to human fear: both provide a metaphorical link to nature. One is ventricular fibrillation's lethality. The other is its whimsicality. **It is the combination of these two factors, lethality and whimsicality, that makes the disease process very potent psychologically and provides clues into why humans treat nature with such disdain.**

Ventricular fibrillation is sudden. It is whimsical. And it strips the mind of a rational or self-delusional defense. With ventricular fibrillation one isn't even afforded the dignity of anticipating its arrival. There is no enemy, like cancer, against which to focus the mind. Life is, then life isn't. One can not legislate against it like AIDS. Nor can one make it a feminist issue like breast cancer. With ventricular fibrillation, death can appear in seconds no matter how well one is feeling, no matter where they are located, no matter how rich or how poor. It is simply an electrical quirk of fate. It is this last reality that makes it so profoundly disturbing to the human psyche.

The fact that a mere electrical short-circuit can cause us to cease to exist pierces straight through to the center of our being. Such

a trivial process seems an undignified mode of exodus. Furthermore, it is devoid of meaning. Thus, to acknowledge the potential for ventricular fibrillation to unproclaimedly take one's life indirectly means relinquishing one's delusion that one can control one's fate or that there is any meaning to one's demise. Even if someone proves lucky enough to be resuscitated from an episode of ventricular fibrillation, this individual must now face the possibility of a 40% recurrence rate over 3 years. When, where, and even, if ventricular fibrillation is to recur, is beyond knowing. As a consequence, those that are resuscitated from ventricular fibrillation often recognize that the chaotic churning of nature has triumphed over their bodies.

## The Link to Environmental Concerns

What do these observations about my patients have to do with environmental concerns? Simply put, it makes the psychological consequences of the fear of death very palpable to me. It allows me to see how desperate is the human need to control our fate and how demoralizing it is to most people when nature triumphs, as it always does. In effect, life or death is a deployment of statistics, a modern version of Calvinistic predetermination without a mythical background.

Ventricular fibrillation represents the wilderness, and thus remains beyond our ken, beyond our ability to control. Kierkegaard recognized that this fundamental fear, so obviously manifest in sudden cardiac death survivors, permeates all of our lives. In his books, "**Fear and Trembling, The Sickness Unto Death, and The Dread,**" he recognized the overwhelming burden of existence to those who would contemplate its profundity. In his words, "The whole order of things fills me with a sense of anguish, from the gnat to the mysteries of incarnation, all is entirely unintelligible to me, and particularly my own person. Great is my sorrow, without limits. None knows of it, except God in Heaven, and He cannot have pity."

## Nature as the Enemy

It is my contention that a variety of environmental ills are fuelled by this conscious and/or unconscious recognition of nature as overwhelming, united to our inability to gracefully accept our inevitable personal extinction. The population explosion, the profligate consumption of resources, the fouling of air, water and land, the callous elimination of countless species, the inability to treat other species as coinheritors of the earth are, I believe, unconscious manifestations of the same process that briefly surfaces in medical illness.

Nature, that is nature excluding us, is being punished by man for what it does best: follow the laws of nature. Death is a law of nature. Consequently, man, with his inability to tolerate the reality of his personal extinction, will lash out at nature and, in a show of Nietzschean will to power, attempt to dominate nature and therefore conquer his own fate. Because death derives from nature, man endeavours to show, in a magical way, not unlike aboriginal tribal magic, that nature isn't as omnipotent as it is.

One form of magic is to unconsciously personify nature as a source of evil, as an enemy literally threatening our very existence. Consequently, if nature is our enemy, its well being is unimportant to us. As an enemy, it is to be dominated. Concern with its health is thus self-defeating. Also, as an enemy, nature is to receive no compassion. In the magical world of human thought, no harm can come to man if he heaps contempt on an insignificant foe, an enemy. This is a thought process engendered

by the overwhelming need to **deny** reality. For man to do otherwise would require a willingness to confront the inevitable. If we assimilate nature into our consciousness as a friend, we must by direct extension befriend that aspect of nature that entails the natural life cycle and its unpredictable termination, including our own termination.

As part of this process of considering nature as an enemy, the traditional male imperatives, dominion and virility, are elevated to a noble cause. By razing a forest of ancient cedars, we express our dominance and virility over the same force that, by inference, threatens our life. It is as if we take a 500 year old tree and use it as a sacrificial offering to ourselves. If we can topple a tall, strong, Methuselah of a tree, then we have imbued ourselves with all the strengths contained within the tree. It is a vampire-like behaviour. And one that magically protects us from our own death.

The need to establish dominion over nature in turn engenders contempt for its well being. The process of heaping contempt upon creation is forged a million ways every day. Pouring toxins into the air or allowing plutonium to seep into aquifers, is another way of treating nature as the contemptuous enemy. We view ourselves so disconnected from it and so beneath us that even the most essential of elements for our survival, air and water, are viewed as something we can do without. Why else would we merrily poison ourselves if we magically didn't think nature our dominion, our slave whose survival depends on our pleasure. The reality that the tables are, in fact, turned would require that we confront our fear of death head-on and not punish nature because of our fear of it.

### Religious Influences

The solution to our environmental problems is to realize that we are within nature, not outside of it. We must recognize the plants and other animals on this planet as our true equals. We must do unto others as we would have done unto ourselves. The difference from the traditionally anthropocentric approach to these words is that "others" refers to more than Homo Sapiens. In the words of Matthew Fox, we must view the winged ones, the four-legged ones, the crawling ones, and the rooted ones with a reverence that befits their stature. They have derived *pari passu* with us, from the same font of creation. These coinhabitants of life do not deserve our contempt.

To become equals with nature means relinquishing our dependence on magical solutions to personal, social and environmental crises. Armageddon, resurrection of the dead, reincarnation, etc unfortunately fall within the realm of magical solutions and when such concepts are woven into the minds of decision makers, they often interfere with environmental concerns. Such religious concepts are invidious to genuine reform, fostering abdication of responsibility for the ills which we own.

Many of the same personalities that propel the developmental mindset also have fundamentalist ideologies. Some former cabinet officers actually awaited a nuclear holocaust because of a vision that Jesus would be riding an ICBM to Armageddon. Visions like this overwhelm reason. The unconscious can not be subdued by reality when magic feeds the soul and fears are laundered in self-delusion. For such individuals, the beauty of a clean stream or an ecologically diverse healthy forest would seem to have little cosmological meaning.

Some claim that fundamentalist Christianity is found widely amongst the foresters of the U.S. Forest Service and the en-

gineers of the Army Corps of Engineers. These people are naturally drawn toward a vocation that trains them to subdue the wilderness. Thus these institutions have difficulty seeing any value to the natural landscape; obsession with personal salvation or with some millenarian clash of titans, makes concern over forests and streams inconsequential.

The connection between fall-redemption theology and denial psychology with its link to environmental degradation runs deep. Fall-redemption theology, exemplified by the teachings of St. Paul, places paradise somewhere where we are not. "I am not of this world", whether metaphorically or literally intended, sums it up. If the son of God doesn't consider this present existence anything but a way station, why should we? Moreover, traditional Christian teaching puts the devil in nature. Jesus was tempted by the devil "in the wilderness". And thus around it goes. In brief, the circle of thought is this.

1. There is an afterlife or eternal life.
2. Nature represents lack of control and the source of evil, death.
3. To avoid evil/death, we must control nature.
4. By controlling nature, we achieve eternal life.

This circle of thought relieves us from the undeniably difficult realities of conscious existence. But it remains a cowardly abdication of self-responsibility to blame reality for one's limitations and fears.

### Obsessions

#### Procreation

The drive to perpetuate our species has new meaning in the context of environmental destruction and its relation to our unconscious motivations. Procreative urges have inconveniently become the baggage of another era. This ancient genetic imperative has yet to reconcile itself with the fact that human procreation has become a planetary malignancy. No other species is capable of increasing its numbers until it chokes on itself. No other species would condemn those who wish to terminate unwanted pregnancies and simultaneously fail to provide for those already in existence, if it weren't projecting its own fear of death onto that of the fetus. To be so obsessed with fetal life yet not existing life is, paradoxically, a way of denigrating all life. The miserable poor "will inherit the earth"; we need not be concerned about them. Our conscience is clear. Otherwise, to deny life to a fetus aborts the means by which we justify our own existence.

#### Doing

From an analytic perspective, we have evolved into a species over-invested in the verb to **do** instead of the verb to **be**. Foremost contained in this obsession with **doing** is the unrelenting need to shape, mold, eliminate, or, in sum, control anything that resembles the wild, herein defined as anything that threatens man's ability to control or at least appear to control his ultimate destiny. Technological advances have served to seduce man into the delusion that control of nature, again read death, is, in fact, possible. In a transitory way, technology has indeed done this for a few. Ultimately, however, technology fails for the individual as it has for the community of mankind. If it were otherwise, we would not face the dilemma we currently have. Ever grander technological feats is not the answer to our problems. They will inevitably fail without the honest acknowledgment of our even-

tual fate and the humble acceptance that we are not as gifted as we think.

### **Righteousness and arrogance**

No other species but humanity destroys its own kind for "ethical" reasons with technological "advancements". No other species would be that righteous. No other species can pave over wetlands and then be amazed that rivers flood. No other species is that foolish. No other species can "harvest" 500 year old forests and then have the hubris to think it can replace it in 50 years, as our US Forest Service does. In fact, the concept of "harvesting" the wilderness is a particular repugnant terminology reflecting an arrogance that pretends that all the earth is merely an outcropping of the agricultural revolution.

### **Image of God**

The full embodiment of man's need to control, manipulate, mold, sculpt, or otherwise shape nature to its human directed betterment finds its origins in many places. One of the most influential sources is begotten from the book of Genesis. The implication throughout this book, and in large measure throughout the entire Bible, is that man is of such paramount importance that he has a higher place in the universe than any other being. To boost our weak ego, we are told we actually look like God. Clearly, spotted owls do not look like God, this we know.

Substantial precedent in the psychoanalytic literature supports the view that man is driven to destroy the environment because of the need to buffer himself from the inevitable. Daily human functioning in our culture and probably the now Westernized world at large, is programmed to resist tenaciously any conscious awareness of our fate. The fall-redemption religions that dominate the United State's psychical underpinnings reveal the power of this resistance in crystallized terms. The quest for immortality, as out-of-touch with the rhythm of nature as it is, manages to solace the population sufficiently to blind humanity to the effect it is having on the environment. The delusion of immortality submerges from view the destruction done in the name of man's territorial and religious imperatives. For most of the waking day, buried deep under mounds of societal ignorance, we conveniently deny the scientific data that heralds an impending global destruction of the environment.

Yahweh's command for man to dominate the Earth has provided fuel to the delusionary process and justifies any abuse inflicted on any species on the planet. Surely, if God made Earth for man, then any use of it is merely part of our proper dominion.

The converse of this divine gift is that that part of nature not dominated by man is in some way not sanctioned by God. In effect, uncontrolled nature is evil. Witness the long held belief that "nature" or pagan religions were considered satanic. Numerous legends serve this theme.

### **Control**

It is this same abhorrence of nature that led 18th century French gentry to pull their blinds and turn their eyes from the woods and mountains through which their coaches travelled because nature was unworthy of human gaze and even disgusting to visualize. Anyone who has visited Versailles or Schonbrun can see the consequence of this "enlightened" perspective. The aristocracy strove to "poodlelize" nature, to anthropomorphize it and

bring it under control. I don't think it coincidental that many who enjoy manicured gardens would promote the razing and paving over of our wilderness areas. Gardens have become a way of shaping nature to our whim. Gardens allow us to pretend nature can be subdued. Strangely, phenomena like crabgrass or "early" frosts nag disquietingly that we aren't quite in control. But we prune and plant in anticipation of doing a better job of controlling the metaphorical garden next year.

Weather forecasting is a parallel phenomenon. Millions of Americans watch the evening news prepared to control the weather. In some ways the TV weather person has taken on shamanic dimensions. Almost priest-like, the weather forecaster dons the blessing of fair weather or the curse of foul. Weather forecasters notwithstanding, nature has its way of bypassing the career goals of cute TV personalities with droughts, oppressive heat, and tornados, reminding us that the weather is not within our dominion, Genesis or no.

And thus, nature stays beyond our controlling grasp. Even if we eventually subdue the weather, moon-sized meteors will continue to fly menacingly near the Earth and the sun will eventually extinguish. No matter how much we feel nature is ours for the taking, ultimately the universe will do as it will do and there's no way out.

Accepting that nature is ultimately beyond our mastering is something that modern man has vigorously avoided. To do so requires a peace of mind that is seldom granted to the driven of our society. To accept that we are not in control leaves us staring at our fate with no palatable way out of the obvious: nature will take us sooner or later regardless of the obstacles we throw in its way as we buffer ourselves from reality.

The amount of national energy dedicated to this enterprise is monumental. Most of us, the artists among others excluded, exert substantial enterprise to expanding, consolidating and guarding our flanks. We fortify ourselves in the world by getting an education to get a good job to buy a good house to secure us from the vicissitudes of life. If this incessant expenditure of energy wasn't expansive by its very nature there would be little pressure to build homes on pristine hillsides, pave wetlands over for the new mall, or clear-cut 500 year old trees to help, in the words of President Reagan, stop the trees from polluting the air.

### **Anthropocentrism**

There is also in this expansive drive the tyranny of cognitive man over the remainder of the biota whose only offense is to be immersed in the act of being instead of the act of controlling. Because we know our fate, and therefore contrive to unknow it by using the cumulative skills of a million years of adaptational self-trickery, humanity takes revenge on those species fortunate enough to be free of conscious awareness of death.

We humans expand our borders at the expense of other species to provide us with our goal: control. To control is to be a demigod. To be a demigod is to be beyond decay. To control the suffering or destruction of plants or animals pricks no conscience if our dominion over these entities shields us from what we refuse to acknowledge. There is no ethos to be violated if other life forms are beneath us, created for our pleasure.

### **Conclusions**

How can the perspective about environmental degradation presented in this paper be used to good end? The first positive use of this thesis is a practical one: know the opponent. For

example, when environmental negotiators face development oriented politicians, simply recognizing the underlying motivation behind their actions, may allow the environmental negotiator to couch his perspective in terms that are less threatening. Another use of this information may come in personal negotiations with individuals whose lands are being pursued for conservation purposes. With the right choice of words and actions, a landowner could be made to feel a type of immortality via a land bequest that wouldn't be possible if that same land were sold to developers. Another implementation of this perspective might come in public debate. The development minded politician might be caught off guard if he were confronted directly about his underlying motivation and forced to defend his position in this light. The shock value alone may be sufficient to diffuse a development oriented argument. A particularly intriguing gambit would be to employ Biblical arguments against the conservative right. Although there are few of these in the Bible, there are sufficient passages that argue for creation rather than for the use of creation, that environmentalists might be able to destabilize the right wing, or at the very least confuse it. This is somewhat counter to the theme of this paper but, on a tactical level, serves a good purpose as we struggle to preserve what little is left. Examples are,

**Isaiah 24: 4-5:**

The world languishes and withers,  
The heavens languish together with the earth.  
The earth lies polluted under its inhabitants,  
For they have transgressed the laws,  
Violated the statutes, broken the everlasting covenant.

**And, Genesis 1:25:**

And God proceeded to make the wild beast of the earth ...

And God saw that it was good.

In the end, our solution to environmental degradation and preservation of wilderness lies in our willingness to address the core issue of our behavior publicly. We must stop the use of socially acceptable excuses for environmental abuse that mask the real issues. Terms like job preservation, greed, votes, health and disease, democrats vs republicans, endangered species, Native American rights are all tangential to primary motivations behind environmental degradation and should be realized as such. Schools must begin to address the role of the denial of death in human history in frank terms, revealing its role in environmental problems as well as in the genesis of wars and the development of empires. An anthropologically oriented teaching of the development of consciousness and its relation to the recognition of our own death must be revealed to the young. This will encourage a more mature understanding of religious influences on modern human behavior. Finally, as a society, we must confront our denial of death not only in the schools, but in multiple public venues. These are not small undertakings but I believe they form the foundation for a long-lasting preservation effort that offers a hope of reversing the damage we have wrought.

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# HOMO CARCINOMICUS: A LOOK AT PLANETARY ONCOLOGY

Frank Forencich

"The world is an animal." - Plato

When we normally think of cancer, we think of diseases of the human body: cancer of the lungs, breasts, liver and prostate. We think of viruses, DNA, asbestos, cigarettes and beta carotene. We think of surgery, radiation and chemotherapy.

There may be more to the picture, however; cancer may be far bigger than we think. There is currently a paradigm shift under way in our understanding. Instead of looking at neoplasia strictly as a disease of the human body, many people are now beginning to see it as a dysfunction that can affect any living organism or ecosystem, regardless of its size. This even includes the Earth itself.

In 1979 James Lovelock introduced the Gaia hypothesis, a theory based on the notion that the planet is a self-regulating or living organism.<sup>1</sup> But if the Earth is a living body then what

physiological role do humans play? What kind of cells are we? Given the state of the planet and exponential human proliferation, the answer is shocking and unavoidable: cancer.

Numerous observers have remarked on the cancerous nature of human beings. In *Science* May 13, 1955, Alan Gregg suggested "that there are some interesting analogies between the growth of human population in the world and the increase of cells observable in neoplasms."<sup>2</sup> In 1990 Doctor Warren Hern diagnosed the problem in his landmark paper "Why are there so many of us?"<sup>3</sup> Nevertheless, "humans as cancer" has not yet been taken up as an issue for widespread discussion. In spite of the popular acceptance of the Gaia hypothesis and the rise of environmental consciousness, the "humans as cancer" metaphor has been largely avoided.

## Physiology

In fact, the parallels between neoplastic growth and human population are astonishing.

- Both are proliferative disorders characterized by uncontrolled growth.
- Both tend to spread throughout the "body" of the organism.
- Both exert pressure on adjacent "tissue."
- Both continue to grow even under extremely crowded conditions.
- Both produce chemicals that have negative effects on remote regions of the organism.
- Both generate new vessels to support their growth.
- Both fail to "differentiate" in form and function.

Cancer is fundamentally a proliferative disorder, a failure to respond to normal growth controls. This also happens to be humanity's problem. Ten thousand years ago there were probably no more than five million people on the planet. Today there are nearly six billion. The increase in population in the last 40 years has equalled the total increase from the dawn of the human species until 1950. World population is now growing by 10,000 people per hour.<sup>4</sup>

In the case of cancerous cells, the problem lies, not in sheer reproductive output, but in the fact that cancer cells are so long-lived. Normal cells have a pre-set, programmed life span. They develop, serve their purpose and then die. Cancer cells, on the other hand, do not die on schedule and have no limit to the number of times they can divide.<sup>5</sup> They are, in a sense, immortal. Because they do not die, cancer cell populations continue to rise unless checked by some other force. Similarly, the increase in human population has been paralleled by a dramatic lengthening of human life expectancy. Now, through life-extension research, we are seeking to increase this to even higher levels, aspiring to achieve the longevity of the neoplastic cell.

In a healthy body, normal cells adjust their growth in relation to neighbouring cells. When population density reaches a certain limit, a feedback mechanism known as "contact inhibition" causes cell division to cease. When you squeeze a normal cell, it stops reproducing. Cancer cells, on the other hand, continue to proliferate in spite of crowding and grow to much higher densities.<sup>7</sup> Human "cells" exhibit precisely the same characteristic. Population density has had little effect on rates of reproduction; experts estimate that by the year 2000, there will be 20 cities with more than 10 million people each. Modern humanity, like cancer, seems to have lost its sense of contact inhibition.

Cancer is notorious for its tendency to spread beyond the point of origin into other regions of the body. The process begins when tumor cells break away from the original mass, travel through the bloodstream or lymphatic system, attach themselves to new sites and begin growing. In short, they "colonize" the new tissue. Human metastasis works in a similar fashion. Since *Homo Sapiens* first took form in Central Africa some 2 to 4 million years ago, we have spread across every continent on the planet. We now inhabit the world's deserts, rain forests, grasslands and high mountains. We have invaded and affected virtually all planetary tissue and we are even making plans to extend our growth into the solar system and local galaxy.

The similarity extends even into the details of the process. In the body, cancer cells infiltrate surrounding tissue through a process called angiogenesis. A neoplastic tumour secretes en-

zymes that destroy nearby cellular membranes, allowing capillaries to penetrate and provide nourishment. At this point, the tumor becomes vascularized and begins to grow extremely rapidly. On the macro scale, human beings pursue a similar strategy. The capillaries are the highways, railroads and canals that bring food and raw materials to communities and neighborhoods. When human beings colonize a new region, district or neighbourhood, one of the first priorities is to clear the land and build these vessels to facilitate commerce with the "body" of the outside world. Once the roads are built, the community is "vascularized" and begins to grow rapidly.

It comes as no surprise to discover that cancer and human population are also related in their metabolism, the consumption of resources and production of waste. In the early 1930's Otto Warburg discovered that cancer cells use more glucose and secrete higher amounts of lactic acid than normal tissue.<sup>7</sup> This is perfectly analogous to human populations that consume high levels of natural resources while generating enormous quantities of waste materials.

Another curious similarity lies in the process of differentiation. As normal tissue grows, it follows a developmental pathway, a genetically programmed sequence of changes in structure that lead to a specialized cell or tissue type such as bone, liver, connective or neural tissue. When cells mature they begin to perform the normal functions of that tissue. Significantly, they also stop reproducing. Cancer cells, however, are defective in differentiation. They get stuck on the developmental pathway and fail to develop the unique forms and functional characteristics of normal cells. In this sense, cancer is a problem of development.

We see a similar process at work on the macro scale. Like cells, human beings also differentiate. As individuals, we develop specialized social roles; one person becomes a farmer, another becomes a computer programmer, another a poet. We each follow a developmental and educational pathway that leads to unique professional form and function. Failure to achieve a functioning social role can be described as a failure to differentiate. When educational quality and economic opportunity deteriorate, we too experience a problem of development.

Human beings also differentiate culturally. A tribe or ethnic group develops its own unique rituals, practices and world view, a specialized form that makes a unique contribution to the human cultural landscape. A variety of differentiated cultural forms makes it possible for the social organism to adapt to changing conditions. Loss of cultural diversity, like loss of biodiversity, threatens survival of the larger organism.

## Prognosis

When we undertake a comprehensive examination of the biosphere, we find it impossible to escape the conclusion that the planetary patient is seriously ill, possibly dying. The symptoms are severe - ozone depletion, global warming, deforestation, loss of biodiversity, topsoil erosion - all the result of a rampaging and over-consumptive human population. Our major social "organs" are losing their effectiveness because of over-crowding: governmental, judicial, health care and transportation systems are all saturated and near gridlock. The patient is clearly in pain.

If an oncologist were to make a diagnosis of patient Earth, he would probably declare it a Stage IV condition: "The tumor is no longer encapsulated; metastasis is widespread throughout the

body. Little chance for cure, although there are some notable exceptions."<sup>8</sup> Since the growth is highly metastasized, it is probably malignant; we are experiencing an "oncologic emergency." We must act now.

### Treatment

When treating a cancerous human body, the oncologist generally has three treatment options available - "cut it, burn it or poison it" (surgery, radiation or chemotherapy). Incredibly, this is exactly what we have been doing to the biosphere: cutting, burning and poisoning the major planetary "organs." Obviously, we are attacking the wrong target; we are behaving as if Gaia herself was the disease. This is like an immune system dysfunction in which the body attacks its own tissue.

Obviously, we need to target the growth of humanity, but for the planetary oncologist, cutting, burning or poisoning the human neoplasm is not a viable option. In the first place, genocide would be, at best, a short term solution that would not solve the problem of proliferation. Even if you could somehow make 2 billion human beings vanish from the biosphere, growth would surge to fill the gap; after 50 years, the patient would suffer a relapse. Moreover, abruptly raising the death rate would have a whole host of side effects and repercussions that would endanger the patient just as surely as the current crisis.

Instead, we need a treatment that is systemic and rehabilitative. The population problem is more than just sheer human numbers. Explosive growth rates are dependent on a vast number of social, cultural and biological factors: poverty, access to health care and women's rights to name a few. Simply reducing birth rates will not be effective; the "treatment" must act on several levels. Just as a good oncologist will apply a variety of treatments in tandem, we too must apply several treatments simultaneously. In addition to the obvious need for vigorous birth control programs, we must completely revise our economic and cultural philosophy away from growth and towards sustainability:

- reduce our consumption of resources
- re-distribute the wealth between North and South
- enhance the rights of women
- devote more attention to the health and welfare of children
- promote "differentiation therapy," increased educational and economic opportunity for individuals and cultures
- protect healthy "tissue," especially wilderness areas
- slow the metastasis whenever possible with growth control at all levels
- moderate our death control efforts: make medical practice more life affirming and less death defying
- start behaving more like physiological participants in the functioning of the organism and less like invading pathogens

The treatment for this oncologic emergency must begin with education and awareness. Oncologists agree that the most valuable tool in the fight against cancer is public education; the more people know about risk factors and prevention, the easier the treatment. What is true for the micro level is also true for the macro level; of all the treatments that we might use against global cancer, by far the most promising is education and biological consciousness. The cure for cancer is awareness of our relationship to our "host."

The fundamental difference between a cancer cell and a human being is the capacity for "host awareness." The malignant cancer cell knows only its local cellular environment: the chemical and neural impulses that act on the cell membrane. A lung cancer cell, for example, cannot travel outside its host and discover the totality of its predicament; it can only "think locally."

A human being, on the other hand, has the ability to become fully aware of his global host. He can get outside the planetary body, both literally and intellectually. Through travel, study and communication, a person can discover the larger organism of which he is a part. He can see the effects of his behaviour and the implications for his own survivability. Most importantly, he can change his behaviour to be consistent with the health and welfare of the host.

Host awareness is vital to the treatment process. The more contracted, local or ego-logical our state of mind, the more neoplastic our behaviour is likely to be. The more expanded, global and eco-logical our consciousness, the healthier our relationship with the planetary body. Death by cancer is not inevitable as long as we pay attention to the welfare of the host. Unlike a cancer cell, we can exercise personal and political choices. We can see, feel and understand the ways of the host. We can act to save Gaia and thus ourselves.

The biggest obstacle to effective treatment is of course, **denial**. No one wants to talk about planetary cancer; the subject is strictly taboo in almost every field of discourse. But treatment demands that we overcome the social and psychological obstacles that are common to both cancer and human population growth: fear, procrastination in seeking treatment, reluctance to self-treat and denial that the condition actually exists. The planetary oncologist must act to bring the issue into the public forum. We must force the issue of human population into the spotlight and keep it there.

As with all cancer cases, time is precious. If we procrastinate in treating our condition, we will be forced to face two extremely unpleasant alternatives. On one hand, we may have to suffer the extremely high level of "collateral damage" that comes with aggressive treatment. The longer we delay in controlling our growth and reducing our consumption, the more radical the treatment will have to be. Drastic measures such as government mandated family limits, enforced birth control and severe rationing will cause collateral damage in the form of repression, martial law, tyranny and widespread social conflict.

If we fail to take action, the consequences will be grim indeed. The carrying capacity of the biosphere is finite; only so many human beings can live on the planetary body. If we do not change our behaviour, Gaia will treat the problem for us. Our death rates will go exponential through famine, disease and density-inspired violence. The human population will be reduced, one way or the other.

The extent and severity of global cancer calls for immediate and aggressive treatment; palliative or "Band-Aid" treatments will not be effective. Unfortunately, most of our current environmental action is directed at symptoms, not at the underlying cause. Action on air pollution, deforestation and recycling is necessary to be sure, but primarily serves to make the patient comfortable, not effect a cure. Without vigorous birth and growth control, our environmental efforts will amount to little more than to "planetary hospice care" - aid and comfort to the dying.

Accepting the proposition of "humans as cancer" can be terrifying and depressing. No one wants to think of himself as a malignant cell. No one wants to think of his community as a tumor. The implications are intimidating; the specter of planetary cancer demands that we re-evaluate our basic beliefs on such subjects as motherhood, family, growth, health, birth-control, social responsibility and criminal behavior. This treatment process will be resisted by many people, cultures and organizations.

Nevertheless, the payoff of this inquiry could be tremendous. "Humans as cancer" describes us as a disease agent, but it also puts us into an intimate relationship with the natural world, our host. In this perspective, we are not apart, we are of the Earth. We may be defective in growth control, but we are nevertheless cells in a larger organism. Even as neoplastic tissue, humanity does belong to the Earth.

When we ask the question "are we cancer?" we place ourselves in a new universe of relationships and possibilities. Simply by accepting the possibility of "humans as cancer," we declare ourselves willing to review our most closely held assumptions about who we are, what our role is, and what constitutes intelligent and moral behaviour. This acceptance may be exactly the prescription we have been looking for.

## Notes

1. Lovelock, J.E. *Gaia: A new Look at life on Earth*, Oxford University Press, 1979.
2. Gregg, Alan *A Medical Aspect of the Population Problem Science*, May 13, 1955
3. Herra, Warren *Why Are There So Many of Us? Description and Diagnosis of a Planetary Ecopathological Process*. *Population and Environment: A Journal of Interdisciplinary Studies*, Vol 12, Number 1, Fall 1990.
4. *Vital Signs: The Trends that are Shaping Our Future*, Lester Brown World Watch Institute.
5. *Cancer: The Outlaw Cell*, Richard E. La Fond, Editor American Chemical Society. Chapter 2 "Cell Growth and Cancer" Arthur B. Pardee and James G. Rheinwald.
6. For example, normal liver cells would not grow beyond a density of 108 cells/cm<sup>3</sup>, while a liver tumor may reach a density of 109 cells/cm<sup>3</sup>.
7. *Cancer: The Outlaw Cell*, Chapter 11, "Angiogenesis" Judah Folkman.
7. See *Understanding Cancer*, Mark Renneker, Bull Publishing Third Edition, 1988 Chapter 6, *The Biology of Cancer* by Laurie Garrett.
8. For a complete description of cancer staging, see *Understanding Cancer*, Chapter 5, Introduction to Cancer Pathology - Terms and Concepts by Mark Renneker.

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# CLASSICAL AMERICAN PHILOSOPHY AND ENVIRONMENTAL ETHICS

Joseph Grange

With the publication of Roderick Nash's *The Rights of Nature: A History of Environmental Ethics*, the discipline of environmental ethics appears to have reached a certain maturity. It now has its own history, a journal [*Environmental Ethics*], a number of major texts,<sup>1</sup> fiercely debated political and ethical issues and even a recently formed international society of scholars and practitioners in the field.<sup>2</sup> And yet the discipline appears split between those who center their ethics on a deontological pivot and those who endorse a utilitarian framework. What is more, a certain legalistic tone infects much of its important work<sup>3</sup>. As a result the movement appears stymied and a level of triviality is beginning to set in.

These signs of weakness are, I believe, the result of an excessive reliance on Anglo-American Analytic philosophy as well as a neglect of the rich tradition of American Process thought exemplified in the work of James, Peirce, Dewey and Whitehead. In what follows I propose to sketch what those sources can contribute to environmental debate. One result should be the clear expression of a categorial scheme for the major elements involved in this discipline. Such a normative conceptual framework can anchor American environmental thought in its own history and provide a needed push toward depth and adequacy.

## Historical Sources

It is by now a commonplace to begin an essay in environmental ethics by berating technology as the final expression of

American process-pragmatism gone mad. Gigantism, greed, shallow relativism and a host of other evils are laid at the feet of America's indigenous philosophic movement. But this is to confuse Dewey with Descartes and scientific materialism with William James. In addition it neglects Pierce's strenuous efforts to ground thought in a normative science. And, finally, it fails to see the axiological depth in Whitehead's philosophy of organism.

James wrote his *Essays in Radical Empiricism* as a protest against the doctrine of matter as "vacuous actuality" - an equation endorsed by the reigning scientific establishment. In its place he offered a radically relational universe, one in which: "**The relations that connect experiences must themselves be experienced relations, and any kind of relation experienced must be accounted as 'real' as anything else in the system.**"<sup>4</sup> Thus nature is a scene of vast, intricate, complex relations. And these activities are fraught with purpose, aim, intent and desires. The universe is as much about its activities as it is about its enduring identities. This is a world of verbs, not nouns. Here is a protometaphysical vision of the importance of nature calling for precision and synthesis.

It is Charles Sanders Peirce who provides a precise, synthetic interpretation. I am, of course, referring to the categories of firstness, secondness and thirdness as well as the evolutionary thematics of tychism, synechism and agapism<sup>5</sup>. Taken together, these concepts constitute a metaphysical recognition of the real presence of the lawful growth of value in a universe of chance.

We are given a web-like universe whose goal is the achievement of worth through strivings toward relational stability and well-being. Most important, it is the normative dimension of experience that drives the process forward - an axiological matrix whose essential dimension is aesthetic.

Law, habit and aesthetic stability are the touchstones of Dewey's pragmatic instrumentalism. Using a biological field theory of experience, he saw nature as a series of transactions seeking instrumental worth and consummatory value. Nature is the *Terra Mater* whose openness is the matrix of all becoming. Both **Experience and Nature** as well as **Art as Experience** provide sets of generic traits that are of great benefit to any environmentalist.<sup>9</sup> Chief among these are: The situational thesis, the reconstruction of experience and the redefinition of the human creature. By "situational thesis" I mean Dewey's insistence upon the problematic context of all environmental activities - an understanding of life as interlocking sets of problems to be solved. These are situations in which intelligence means choosing a path where resolution can be achieved. Likewise, experience is reconstructed along the lines of the instinctive, the cognitive, the emotive and the purposive. Given such an expansion of natural traits, the human being must be viewed primarily as the live creature seeking creative stabilities. Thus nature no longer signifies a region of dead and inert matter but rather a complex scene of interactive processes whose essential meaning is the future. The real world of nature must include a sense of the possibilities of existence. Anything else is an evasion of responsibility and *a priori* environmentally unethical.

James' relational universe, the normative cosmos of Peirce and Dewey's transactional world of experience provide a background for some four elements involved in any conceptual framework for environmental ethics. These are:

- The concept of internal relations
- The place of norms in a world of fact
- The role of choice and action in environments
- The relation between causality and spontaneity

It is Whitehead's achievement to have woven these elements into a coherent and applicable cosmological tapestry. Beginning with **Science and the Modern World** and culminating in **Process and Reality**,<sup>7</sup> he set forth the following understanding of nature. That nature is a set of entwined events whose meanings are best described as achievements of value. And that these states of affairs are in the process of coming to be and passing away by reason of how they internally harmonize their respective environmental regions. Furthermore, these events are mixed occasions of conditional features and essentially spontaneous creative opportunities. And, finally, that the success or failure of these interlocked realities are the outcome of how well they employ the norms by which their creativity is guided.

Thus with systematic sweep and the flash of genius Whitehead provides a general view of nature that endorses the intrinsic value of every entity. It also provides normative measures whereby the relative worths of environmental regions and the entities that inhabit them can be assessed. The concept of internal relations is secured by reason of the very internal constitution of each event. It houses its respective world. The place of norms in this factual world is guaranteed through the presence of subjective aims driving toward a variety of possible satisfactions. Choice and the possibility of action is shaped by the relative force of

essential and conditional features in each ecological niche. Both possibility and actuality combine in each event: This is one of the dimensions of epochal time for Whitehead. From this perspective the relation between causality and spontaneity also becomes evident. The past is the settled outcome of choices lying at the border of the present: it represents both a constraint and a supporting structure for the present. The present is the moment of spontaneous choice whereby the past is affirmed, altered or radically rejected. The future becomes the domain of those normative measures used by the present to structure the value of its relations. Process is reality to the extent that all three modalities of time figure in the real internal make-up of events. Whitehead's formal cosmology provides the precision and descriptive power lacking in earlier American philosophy. In fact, properly understood, it provides a set of categories with which to understand the generic traits of environments and their entities.<sup>8</sup>

### Environmental Categories

There are ten environmental categories: **Harmony, functional simplicity, patterned complexity, intensity, novelty, contribution, order, stability, endurance and change.** The first six categories refer to individuals within environments. The last four categories deal with environments themselves. The distinction is important for environmental ethics must deal not only with individual entities in their own uniqueness but also with the environments which support or destroy them. In fact, the really important questions in environmental ethics are about the ways in which values get transported around systems. Change is to be understood as the alterations of value structures and consequent shifts in the axiological register.

Of the first six categories the first four [harmony, functional simplicity, patterned complexity and intensity] refer to the intrinsic reality of the events in question. They, therefore, can be called genetic categories - ways in which events shape themselves. The other two [novelty and contribution] name ways in which entities influence their environments. They are therefore, to be understood as morphological categories - they describe the manner in which entities shape their respective environments. The final four categories [order, stability, endurance and change] name the primary ways in which environments condition their members. They are, therefore, conditional categories. An examination of each will show how they function as normative structures for environmental processes.

**Harmony** is the special way in which entities hold their being together in an environment. This act of self-generation is carried out against the backdrop of its environmental situation. Any environmental activity is an example of this fundamental genetic category. **Functional Simplicity** names the way in which entities achieve their unique determinateness in the face of environmental plurality. A one rises out of the many so as to function in a simply identifiable manner. **Patterned Complexity** results from the way in which environmental entities set the limits of their world. A harmony grows in complexity to the degree it admits components of its actual world into its functional simplicity. Patterned complexity is the solution to the problem of maximizing environmental inclusion while maintaining functional simplicity. So far as we know, human thought is the richest representative of this categorial process. **Intensity** is the outcome of harmonic creativity. Through the contrast of unity amidst plurality a feeling tone of identity through difference



expresses itself during an event's process of becoming. This is the intrinsic reality of an event. It is its value.

The morphological categories of **Novelty** and **Contribution** measure the ways in which entities register their impact on environments. At its lowest level novelty signals the presence of difference in an environmental region. This, of course, is continually happening in a process universe. Major environmental changes occur when the category of novelty reaches a certain critical mass. In such a case an environment is compelled to take significant notice of a new entity in its midst. Important novelty appears at the moment when an environment begins to take on the character of the novel harmony. This marks the emergence of the category of **Contribution**. It is the category of contribution that most concerns environmental ethics. A fundamental aspect of the world is the insistent presence of novelty and its character as a vector influence. It is the business of the special sciences to detail these influences from their respective perspectives. This cosmology views technology as but another species of novelty. It cannot be simplistically typed as artificial and thereby rejected as a threat to the natural.

The four remaining categories are termed "conditional" because they govern the environment in general. The conditions which shape the coming-to-be of all environmental individuals are **Order, Stability, Endurance and Change**. An **Order** is a sphere of relevance such that its constituents shape the behaviour of each other. Thus purpose is an essential element in the concept of order. As an environmental norm order refers to the ways in which individual entities are sheltered from alternative perspectives. When a given order establishes a certain regularity, we can speak of the presence of **Stability**. It is important not to confuse stability with sameness. In fact, given the doctrine of harmony underlying this categorial scheme, the way to stability is through variety, not sameness. Thus the scheme is in accord with the best contemporary thinking in the science of ecology. **Endurance** marks the emergence of importance for nothing significant can take place without some level of consistency and depth. Enduring entities are the outcome of successive forms that enhance each other's values. Thus the sense of environmental character present in such expressions as "The Mountains" or "The Plains" or "The Desert" is the recognition of the expression of a continuous character throughout a period of time. Finally, there are many forms of **Change**, each possessing its peculiar aim and disturbing environmental stability in various ways. The minimal form of change would be the rhythm of time marking out the passage of things in the forward movement of process. Maximal change would be the complete rearrangement of all the forms of order in an environment. A nuclear explosion would be an extreme example. The worth of change is to be specifically evaluated by reason of its contribution to the family of harmonies within which it lies.

Such a categorial scheme, rooted in the history of classical American Philosophy, can supply a needed depth to contemporary efforts in environmental ethics. It also connects that

discipline with the special sciences - a relation largely neglected in present discussions. The categorial scheme can bring together humane and scientific studies because it is cosmological in method and design. A cosmology attempts to define the generic traits of this actual world and set up objectively vague [in the Peircean sense] categories requiring further specification for their full understanding. Thus the term "event" is a vague category that takes on needed concreteness when dealt with by chemists, biologists, social scientists and others. Such discussions and applications supply the bedrock for environmental ethics as the study of important truths. In suggesting a set of unifying cosmological categories, Philosophy returns to its original American purpose of providing normative measures for the important decisions of civilized life. The sciences continue to gain respect and the humane studies also have their place. In this way Philosophy performs its primary function as critic of abstractions and reconciler of opposed positions. This was the insight that guided the work of the classical American philosophers. Its neglect has been the source of much confusion in the present practice of environmental ethics.

#### Notes

1. Among these are Holmes Rolston, III, **Environmental Ethics** (Philadelphia: Temple University Press, 1988); Paul W. Taylor, **Respect for Nature** (Princeton, N.J.: Princeton University Press, 1986); Peter S. Wenz, **Environmental Justice** (Albany, N.Y.: State University Press of New York, 1988); Eugene Hargrove, **Foundations of Environmental Ethics** (Englewood Cliffs, N.J.: Prentice Hall, 1989); J.B. Callicott, **In Defense of the Land Ethic** (Albany, N.Y.: The State University Press of New York, 1989).
2. The International Society for Environmental Ethics boasts some 225 members in over 20 countries. This membership was attained in less than one year.
3. For example Christopher Stone's **Should Trees Have Standing? Toward Legal Rights for Natural Objects** (Los Altos, Calif.: William Kaufmann Inc., 1974) is often cited as a foundational essay. It is, however, more a legal brief than a philosophical study.
4. William James, "A World of Pure Experience," **Journal of Philosophy, Psychology, and Scientific Method** 1, no. 20 (29 September 1904).
5. See the essays *passim* in Justus Buchler, ed., **Philosophical Writings of Peirce** (N.Y.: Dover Publications, 1955).
6. John Dewey, **Experience and Nature** (Chicago: Open Court, 1925); also **Art as Experience** N.Y.: Capricorn, 1960).
7. Alfred North Whitehead, **Science and the Modern World** (N.Y.: Macmillan, 1925) and **Process and Reality** (N.Y.: Free Press, 1978) corrected edition.
8. The categorial scheme is developed through the advances made on Whitehead's thought by Robert C. Neville, **Recovery of the Measure** (Albany, N.Y.: State University of New York, 1989) and David L. Hall, **Eros and Irony** (Albany, N.Y.: State University of New York, 1982). See also Susan Buck-Armstrong, "Whitehead's Metaphysical System as a Foundation for Environmental Ethics," **Environmental Ethics**, Vol. 8, No. 3. (Fall, 1986), pp. 1-18. The continuity between Whitehead's metaphysics and American Pragmatism is well demonstrated in W.G. Frisina, "Knowledge As Active, Aesthetic and Hypothetical: A Pragmatic Interpretation of Whitehead's Cosmology," **The Journal of Speculative Philosophy**, Vol. V, No. 1. 1991 (New Series), pp. 42-64.

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# THE LOGIC OF ENVIRONMENTALISM

Frank Ebersole

This essay is an attempt to examine a certain kind of argument and the part it plays in environmentalism. To show the nature of this argument (as against counter arguments), I use the example of controversy over the clear-cutting of forests, and in particular the clear-cutting of old Douglas-fir forests.

## I.

What is a philosopher to say about environmentalism? What is there in the idea of "the philosophy of environmentalism"? First, one might think there is a basic philosophical question, "What is environmentalism?" to be thought of as analogous to such famous philosophical questions as "What is knowledge?" "What is perception?" and others. But it is not analogous to those questions. We have preconceived ideas of knowledge and perception, some simple models or pictures in our minds which mislead us and which, give force to the questions. We can try to see through the source of our mistaken ideas by the simple but difficult device of turning to examples which show how we speak of knowledge, that is, of knowing something, or of perception, that is, of seeing something. But we have no preconceived and puzzling idea of environmentalism. And we cannot turn to uses of the word "environmentalism" as we can to uses of the words "know" and "see," because it is not an old, basic word. It is a recent made-up word and seems to be used by a person to designate almost any relevant doctrine or program he is concerned with. There are no confusions we can rid ourselves of by looking at examples in which people use the word "environmentalism."

Philosophy has always been concerned with logic and arguments. That may suggest the way to approach environmentalism. We can look at arguments used by environmentalists, and arguments used against them. In a round about way, this might even give an answer to the question "What is environmentalism?"

After all, environmentalists and non-environmentalists do oppose each other, and they argue, sometimes abusively, with each other. A non-environmentalist thinks that the environmentalist would disturb his practices or his way of life, or ruin his business. And he is right. Often the environmentalist would do these things if he could. Even so, the non-environmentalist does not say that he is opposed to environmentalism. He says he is opposed, not to environmentalists, but to "extreme environmentalists." He thinks they do not understand his business or his attitude. On the other hand, environmentalists say that non-environmentalists do not understand the issue at all. The non-environmentalists want to say that they too are environmentalists, but not "extreme" or "fanatical." Regardless of what these opposing people call themselves or what they call one another, I shall assume that there is a big and important difference between

them. I shall call some "environmentalists," and their opposition "non-environmentalists," and I shall abbreviate these names as E and NE.

In order to consider the opposition between E and NE it may be best to begin with NE because he is concerned with fairly simple "practical" or "prudential" matters. Suppose we are talking of cutting a large tract of old forest. NE will be concerned with the price of lumber, the cost of road building, the price of contractors to do the cutting. The timing, shall we cut now or later? Is there unemployment, and will this give necessary work? E may think that some of the forest should be saved for recreational purposes. Under recreational will be counted camping, birding, hiking, getting away from it all. Should the cutting wait until a study is made of the plants of the area, to make sure that "sensitive" species and plants which could provide useful drugs are not eradicated? NE will think that E takes a most extreme position on these matters, wants to set aside too much land for camping, wants too long a delay for plant surveys before cutting can begin. NE will think that E ignores the need for lumber, and employment for equipment operators and loggers. He will think that E exaggerates the need for camping and hiking, and exaggerates the dangers of erosion and stream contamination, and the possibility of exterminating plant species. And he may be right because E may exaggerate in order to get a better compromise. And the same with NE. He will overstate the need for jobs, and minimize the risks of environmental damage. E and NE thus come to define each other, arguing about the consequences of cutting, how much harm to streams, the effect on fishing and bird populations, and such matters. Enter the politician at this point with his "There is room for both environment and jobs, environment and economic progress."

If this is all that the differences between E and NE amounted to, their arguments and their positions would not be philosophically interesting. But there is something else entirely behind E. Often it does not appear as clearly as one might want, but then sometimes it comes out quite clearly. It comes out most clearly when arguments revolve around the possible extermination of some plant or animal. I think E would never allow his only argument against extermination of an endangered species to be a prudential one, such as that we ought not to exterminate a plant because it may be discovered to contain some important drug. E's argument against extermination will certainly be of a different kind: a living thing is a unique, astoundingly complex being. We might be able to make a model or simulation of a living creature for a gallery or a museum, but the simulation could not be made to live and take its peculiar place in nature.

Although I have heard NE's argue for the extermination of a species, I think they are not comfortable in doing so. "The jobs

needed by workers requires the extermination of the Northern Spotted Owl. Well, many species have been exterminated and the human race gets along quite well without them. So let's get on with it and say good-bye Charlie to the owl." I suspect that this NE, when he looks back on his words, will wish that he had not said what he said. E will want to divorce himself from any such argument, and will want to make a final, rock-bottom appeal of an opposite sort, "Almost nothing can justify the extermination of a species." A similar non-prudential appeal plays a part in many E arguments which do not involve a question of extermination. Perhaps Es should make it clearer than they do that their arguments are of a different kind. "Shall we cut this forest of old growth Douglas-firs?" "No, not unless some extreme considerations make it absolutely necessary. I cannot imagine now what such considerations might be." The answer to many questions will be of the same form. Shall we dam this river? Shall we drain this swamp? Shall we divert this river for future city needs? The answers will be the same "No," unless there is some overwhelming reason why it is necessary. This "No" is not a part of any prudential argument.

Compare these arguments with others which do not involve environmental matters:

(1) Consider the decision to build the Aswan dam on the Nile River, and try to imagine the arguments that must have been used for and against it. The dam would raise the level of the water and flood all the tombs, pyramids, temples, statues, monuments of an ancient civilization. These things would be covered with water and would eventually be destroyed. Of course this would not be done without first making drawings, tracings, casts, photographs, etc. so that as complete a record as possible would be preserved. The argument for the dam was this: the country was desperately poor, and its people lived in misery. The water could be used to farm thousands of acres of new land and provide much needed food. The overcrowded cities also were in need of the water. But there were arguments against. Thousands of tourists would no longer come to see the remains of ancient Egypt, and the country would lose all the money they spent for airfares, busses, riverboats, hotels, restaurants, stores. It would be a great loss to the tourists themselves. All the values of travel and vacations: pleasures of a boat trip on the Nile, relaxation in the desert, and above all, the experience of seeing the remnants of a wonderful ancient civilization. These are all prudential arguments against the dam. But in addition to these there was surely an argument of a different kind. The idea of destroying such amazing works of art and such remains of ancient history is simply unthinkable - even with the guarantee that complete records and copies would remain. Copies and records are not the same. Some almost unimaginably strong reason would need to be invoked to build the dam. Well, evidently such a reason was believed to be found - because the dam was built.

(2) Toward the end of a long war, a general approaches the enemy's capital city. He plans what he hopes will be the final campaign, which will bring the downfall of the capital. Day and night he bombs the city, targeting anything that will hasten its surrender. He learns that a famous cathedral, a building of awesome beauty, is being used by the enemy as an ammunition dump. The general worries, studies pictures, consults with any expert he can find. Finally, he comes to a decision, calls in his bombers to reduce the cathedral to rubble. Or maybe his

deliberations led him the other way - and he carefully avoids harm to the cathedral.

The point of the examples, of course, is to suggest that the questions raised, (1) Shall we build a dam and destroy the artifacts of an ancient civilization? (2) Shall we destroy a cathedral in order to speed a military victory? - that these questions are importantly similar to the question, Shall we clear-cut the remaining old Douglas-fir forests in order to provide work for loggers, and to save mills which cannot afford the expense of conversion to other types of logging? Perhaps these questions are similar to many other questions debated by E and NE. Shall we build a dam, a highway, an airport, shall we drain a wetland, divert a river?

## II

Often part of E's argument is an effort to get people to see some environmental destruction, or to recognize that some policy or practice will bring about destruction. Sometimes it is easy to bring about awareness, sometimes very hard.

Isn't there an inconsistency in our reactions to and the things we say about different environmental destructions, damages, losses? Think of the oil spill in Prince William Sound, Alaska by the tanker Valdez of the Exxon Oil Co. There was massive magazine, newspaper, and television coverage; many photographs and news reels of dying sea otters covered with oil, bald eagles dripping oil, too weak to fly. There were expressions of sadness and disgust from people interviewed. "This must never happen again." Now think of the clearcutting of a forest of old Douglas-fir. It is hard to imagine any greater environmental damage. In a short period of time, a logging company with modern equipment, can turn a forest into a land of desolation, destroying every shrub, flower, fern, killing every young bird in its nest, every young mammal in its burrow. Thousands of small mammals are killed, voles, shrews, flying squirrels, so that even if predators such as hawks, owls, weasels, foxes were to somehow survive, they could find no food. After the cutting there are no snakes, lizards, salamanders, slugs, snails, mosses, fungi, worms. Photographs of the resulting desolation appear only in specialized journals and documentaries; a barren land of broken stumps, uprooted brush, scoured and punctured with ruts and holes.

Our reactions to the two environmental destructions are very different. We are sickened by one, and filled with rage; we scarcely take notice of the other. Why do we react so differently? Perhaps because we think first and mainly in prudential terms. The oil spill meant that a valuable catch of herring would be lost - these are the fish whose roe are sold at high prices to the Japanese. The billion dollar salmon industry was threatened. Hundreds of fishermen were thrown out of work. Tourist cruises were cancelled. Airlines, motels, restaurants, cabins, camps lost thousands of dollars because tourists were discouraged from travel to the area. All of this could be and was reported in terms of millions of lost dollars. Also, the fairly futile effort to clean the rocks and beaches cost millions of dollars. The Exxon oil Co. was fined millions of dollars for its carelessness.

On the other hand, the accounting of the forest clearcut could only be reported as profits in dollars to lumber companies, equipment companies, road builders. Also numbers of people employed, at what salaries, and the contribution of the whole operation to the economic life of the mill community.

Strange as it may seem, the first step in E's arguments in the clearcutting case is to become aware of the great destruction of nature, and the helping others to become aware of it. Sometimes the prudential, economic factors help to see the environmental loss because the prudential and intrinsic values go together, as they do in the case of the oil spill, sometimes they do not as in the case of the clearcut forest. Perhaps, too, we minimize the damage to the forest because we are led to believe that it will be replanted and will soon return to its original state. Of course, this is wrong. Trees will be planted and a tree farm will grow, or if left long enough, a new sort of forest will develop. Prince William Sound will return to something near its original condition long before a clearcut old forest will return to anything like its original self.

### III

Sometimes NEs seem not to recognize the destruction which results from clearcutting because they think under the influence of an improper analogy. A farmer cuts his cornfield and destroys the summer beauty of the field, leaving a brown expanse of stubble. Then, come spring, he prepares the earth (without plowing if he is a modern farmer), plants and grows new corn, so that by midsummer he has a new green cornfield, a duplicate of the field of last year. Those who engage in the business of cutting forests often talk as though they were doing something like cutting corn. They talk of "harvesting trees," and talk of forests as "renewable resources." But they are not prepared to call what they cut a "crop," it seems, maybe because in most cases they did not plant it, and though they do often plant trees after cutting, there is a vagueness in what they say they are doing. They do not make clear what we are to think their replanted forest amounts to. They argue, sometimes, that Es have an improper concern for the cutting of the forests, because the forests will be replaced. NEs show a lack of understanding here, because when insisting that the forest will be replaced, they often agree that the time required for replacement of the old forests may be many hundreds of years, and they do not seem to think that this time span affects the claim that replanting will replace the forests. "We replant more trees than we cut. The trees grow, and in due time will make new forests. Nothing is lost. Unlike mining or oil drilling, logging is a sound environmental business."

Although the analogy with farming is tempting, the time required for replacement of a forest after planting, destroys the basis for the analogy. The best bet for getting back something like the original forest would be to replant a proper mix of the larger trees, Douglas-fir, hemlock, red cedar, white fir, and others, and then to let nature take its course. The bushes, ferns, flowering plants might all get planted by wind and by jays, mice, and towhees. After twenty years, say, we could check and try to replace things that we find missing. Then, how soon do we get something like the original forest? The larger trees in the old forest were between 200 and 800 years in age, and there were probably a few giants in the 1000 year age class. The exact figure is not important, so let's say that we will get back the old forest in 800 years. Now I find it most difficult to think of such a thing, that is to think of accomplishing a desired result in 800 years, of planning on the definite outcome of our work after such a length of time. I am to think of standing among giant trees in morning mist, the greens of lichens and mosses, the movements of light in the upper branches, the glides of flying squirrels, songs of winter wrens. I don't want to do fantasy thinking about this, the

kind in which one can think of almost anything as if in a fairy story or cartoon. How am I to do hard tough thinking as though this outcome were something I could count on? It is pretentious to suppose that I could know the required things about a time 800 years in the future. The hikes in the forest shadows, sitting by a campfire at early nightfall. What reason have I to think that this government of ours will last 800 years, or after that time that this country will still be here, or that people will live in this place, or even that the earth will be inhabited by human beings at all? This is a long time as human history goes. Suppose that Thomas Jefferson had planted trees with the idea that they would grow in Virginia the kind of forest we are thinking of. Then we would now be only a fourth of the way to having that forest fulfil the outcome he had imagined. How are we really to think of Jefferson having such ideas. To make plans for human beings, their needs and pleasures in 800 years, is not a thinkable thing.

There is something else wrong, I think, in the way that NEs use the idea of replanting forests. If the clearcutting of forests has left an ugly and undesirable space, then of course we should plant trees in that space. Trees are better than the desolation of a clearcut expanse of gullies and snags. But sometimes NE invokes the idea of replanting as something that will make clearcutting acceptable in the first place. "We are not doing the harm you think. The loss is temporary. You're going to get it back." Surely the only justification for cutting trees is that wood is necessary to human society. If forests are clearcut, we will never get them back. It follows that when it is necessary to cut it should be done in a manner that does the least damage to the environment, to plants, animals, soil. After all, there is a recognized alternative to clearcutting, which does far less damage. This is selective cutting, and it was the method used in some of our national forests until 1964. If old forests must be cut, then the selective cutting could be mainly of younger trees, allowing the old giants to stand. Clearly, the right thing is to preserve all of our little remaining old growth, and to cut selectively in younger forests.

### IV

Only an uninformed or unobservant person could argue, "Nothing to fuss about: the forest is not permanently lost by clearcutting. It will be replanted and we will have the forest back." Most of the old forests are in the keeping of the National Forest Service, and the NFS, when it contracts a clearcut, has no intention of replacing the old forest, or even of trying to grow a new forest anything like the old. Generally, clearcutting is only the first step in what the forest service calls "even-age management." Next is the operation called "site preparation." The methods of site-preparation differ from one place to another, but typically the first step is to bulldoze stumps and brush into piles and then to burn the piles, often with the help of diesel fuel. Then everything is done to prevent the regrowth of anything but "preferred species." The earth is rolled with heavy equipment, and any remaining vegetation is chopped up. Sometimes the ground is treated with herbicides. Finally, the prepared area is planted with "preferred species." When Douglas-fir, Hemlock, Cedar forests are cut, the preferred species is Douglas-fir. (It is not always the case that the preferred species will be the species which was dominant in the forest cut. Beech and Magnolia forests in Texas are replanted in Loblolly pine.) After the forest service plants young Douglas-firs, for example, they make every effort over many years to prevent any other trees from getting a

start. The "undesirable species" are "suppressed" by the use of herbicides and by burning. In time, they get an "even-age forest." In Sweden, where such even-age forestry has been practiced extensively, and for a longer time that it has in the U.S., such forests are popularly called "ugly forests."

If the chance is small that anything like an old Douglas-fir forest will return after a clearcut, the forest service, by practicing even-age management, makes sure that there is no chance at all. My only purpose in making these observations is to show that anyone is wrong who uses the argument: "there will be no loss because the forest will be regrown." Although some people do use the argument, it can only be because they are not informed. Once an old forest has been clearcut, I'm sure that any E would argue against site preparation and even-age management. After the original, irreplaceable thing has been destroyed, the best thing would be to try to cut your losses by replanting a mixture of trees and other plants which will have the best chance of developing a life-community like the original. And then, when some of the trees are mature, to practice careful selective cutting. I have used the example of an old Douglas-fir forest in order to show the destructiveness of clearcutting in magnified form. The arguments against clearcutting apply equally to second growth forests. A forest of any kind is a complex life-system, a subject for all sorts of interests, and certainly should not be utterly destroyed by clear-cutting. But when lumber is needed, the forest should be cut selectively, in such way that it changes as little as possible the integrity of the forest ecosystem. Clear-cutting can be justified only in a few extreme cases.

## V

In order to examine the difference between an environmentalist and his opposite, I have created simplified characters, E and NE. With all its simplification, the discussion may still be of value. So I shall continue with more questions about differences between E and NE.

1. There seems to be no basis for any reasoned disagreement between them. NE might say to E, "You think only of the needs of people for recreation. You do not think of the needs of loggers and other workers for regular work and pay, or the needs of their families for homes and stable communities." E will reply, "I am not thinking of anyone's needs or recreation, or for that matter, I am not thinking of anyone's needs at all." Of course, there is the need of the country for lumber and wood products. But there is no need specifically for those old forests of giant trees. The needs of the country can be supplied by other trees, ideally from forests which are selectively cut on a self-sustaining basis.

What is the nature of this disagreement between E and NE? E will think that NE is unable to see or to appreciate something, that he has weakness of perception, something like a blindness. What else could explain his easy willingness to destroy one of the few remaining forests of old Douglas-firs? Doesn't he sense the eerie magnificence of this deep forest? Or isn't he aware of the unique animals, flying squirrels, salamanders, red voles, spotted owls? Or, of the mosses and fungi? On the other hand, NE might be imagined to say that E has a blindness and insensitivity to human needs, the needs of loggers and their families and others. Maybe there are some people with such insensitivity, but it is implausible to represent this as the view of E. E does not want to deny loggers a job. I think E wants to see that everything

is done to supply loggers with new or alternative work, to aid in the conversion of their mills, and to support their communities.

Suppose - what is quite unlikely - that some NE comes along who seriously considers the possibility that he has some kind of blindness, as E says that he does. What could he do to overcome it? This is a difficult question. There is nothing simple or special he could do. A change in attitude, in "vision" takes a long time. It is hard to say anything without seeming simple minded or facetious or insensitive. I suppose the only answer is something like this: he should get a copy of Peterson's **Field Guide to the Birds** and a pair of binoculars. He should get a good flower book, fern book, insect book, tree book, magnifying glass. Maybe a camera with telephoto lens. The idea being, the more one knows about something the greater his love and respect for it.

2. One might think that this idea of environmental blindness which E uses will work as much against him as against NE. Perhaps there are two blindnesses, one for NE, one for E. Or better, there are two different ways of seeing things. NE sees trees as commodities, E sees them as things of beauty. This is a familiar way of putting certain disagreements: one man's meat is another's poison. Some people see trees as God's creations, others see them as the forms in which nature grows lumber.

The trouble with this account can be simply put: it is wrong. It is wrong in the sense of being wrong-headed, wrong by being a confusion. When E says that old forests are amazing places, full of mystery for science and everyday curiosity, he is not saying that he sees them as such places. He is saying that they **are** such places. He is not saying that forests seem to him places of beauty. He is saying that they **are** places of beauty. Likewise for NE. He is not saying that he sees trees as commodities. He is saying that trees are commodities. Forests do not look like stands of lumber. They **are** stands of lumber. The trouble is that NE does not seem to recognize that forests are places of wonder, of largely unknown ecological complexity, irreplaceable, places which should not be clear-cut or treated to other devastation. He does not seem to think that they should be cut in a most careful manner and only when necessary. This is what E thinks of as NE's blindness to the forests and the life within them and dependent upon them.

3. This discussion shows that environmentalism is a simple, straightforward position. It is not opaque or mysterious, and does not require any metaphysical or religious world view to support it. Aldo Leopold, who is as direct as anyone and as free of obscurantism, still thinks that something he calls a "land ethic" is required to explain and support environmentalism. We must become environmentalists, and in order to do so, according to Leopold, we must extend our ethical and social concepts to apply to plants, animals, rocks, and earth as well as to human beings. History has shown that it is necessary for humans to constantly extend their ethical ideas. At one time they were extended to include slaves, and more recently to include women. Leopold thinks we must now include animals and plants as well. These are puzzling things for Leopold to say. The attitudes of certain societies toward slaves and women certainly has changed at times: I do not know how it can be described in some simple way and made to apply to both slaves and women. Perhaps slaves and women were given the rights of citizens. I do not know how we are to think of ethical ideas as applying to plants, animals, earth. What ideas? The right to be protected from foreign enemies and bad neighbours? When accused of bad behaviour, the right to be

judged by peers in a way designed to produce fair judgment. What ethical concepts do we extend? "Guilty"? "Not fully responsible because of circumstances"? "Under obligations to pay taxes, fulfil contracts, carry out promises"? It is hard to see what ethical terms we are to extend, and how to apply them to trees and earth. Because Leopold's suggestion is so wildly paradoxical, perhaps we can lay it aside, and assume that he is telling us to change our attitudes and feelings toward the natural world. Have more interest, respect, love. Environmentalism is the simple recognition that living things of the world are wonderfully complex and interesting beings. Each has its own unique form, and it fits its place in nature in a most intricate way.

4. The main thing I have done in this essay, I think, is to have brought out the basis of E's position, namely, that it is non-prudential. I shall try to generalize, even though it is dangerous. Someone may find it more useful than harmful. E's arguments, then, are like this: something should be done about x because of what x is. What comes next depends upon an appreciation of x and will differ from one x to another. In the case of E, he will be able to converse or argue with NE only if NE shares E's appreciation of x or is willing to try to do so. Where x is an old forest. E says simply, "WE should preserve the old forest." I hope I have made it clear that E does not say, "Preserve the old forest - because it is a good place for relaxation and contemplation," and he does not say, "Preserve the old forest because it is an important part of a beautiful landscape. Sometimes NE thinks that E's objection to clearcutting is that leaves bare, ugly square patches

in the forested mountain sides. I don't think that anyone is pleased with the effect that clearcutting has on the appearance of mountain sides, but E, as I am representing him, would think that clearcutting is a bad thing mainly because it is a careless destruction of forests. Beauty should be considered, but it is not the main thing to be considered. E. is talking about the forest: a complex community of trees, ferns, mosses, flowers, insects, birds, mammals, soil; the forest as a thing which becomes better understood after months and years of observation and study. The insistence that a forest should be saved from clearcutting is analogous to these: "A cathedral should be saved from military destruction." "A prehistoric artifact should be preserved." In these cases the appreciation involved is one which comes from a study of architecture and religious history, or from archaeology and anthropology. But these are not environmental matters. What makes the example of forest clear-cutting an environmental matter, of course, is the fact that forests are among the things that people have in mind as "environment." "Environment," I think, in this case means "nature," "natural world," as opposed to "human creation or construction."

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## THE PASSIVE VOICE OF SCIENCE: LANGUAGE ABUSE IN THE WILDLIFE PROFESSION

Mary Kahn

The mind - the culture - has two little tools: grammar and lexicon. - Annie Dillard

### Introduction

Sociolinguists have long understood the connection between language and power. Invariably, we reveal our regard for and domination of others not only through our deeds but through our habits of language as well, encoded linguistic biases of which we are often unaware. Yet conscious or not, linguistic behaviour works as a powerfully insidious vehicle in creating and maintaining hierarchies of power, perpetuating the devaluation and control of others, including other beings.

It is now well documented how sexism in the English language facilitates the psychological invisibility and social degradation of women.<sup>1</sup> Little has been expressed or written, however, on the extension of this linguistic chauvinism to other species. And yet the scientific literature is replete with language habits and linguistic markers which ensure the continued debasement and devaluation of non-human animals. Just as workers in eastern Europe's concentration camps were forbidden to speak of Jewish prisoners as individuals, as "she" or "he," biologists are similarly desensitized to the sentience and inherent worth of non-human beings by the language patterns of their profession. And nowhere is this learned code of language/behaviour toward other species

more readily disclosed than in the annals of animal research and management.

### Outside the Realm of Moral Responsibility

Wildlife biologists in particular use their own "little tools" of grammar and lexicon well. In reviewing the scientific literature written and indeed, highly esteemed by those in the wildlife profession, I am repeatedly struck by both its voice and exceptionally rigid style, linguistic structures not simply encouraged but professionally required of all research scientists. ("I don't know any other way to write," a graduate student in the sciences recently confessed to me.) As a student of language and expression, I can only recoil from the biologists' cold, dry-as-dust objectivity, their antiseptic gaze on death and indignity, and their consistent use of the passive voice to avoid the appearance of responsibility. For in the passive construction the actor has disappeared - the doer has disconnected - replaced by the deed itself, sterile and isolated, and apparently accomplished without human input.

The following article, chosen at random from a ten year selection of the widely respected **Wildlife Society Bulletin**, serves to illustrate: 1) the nearly total lack of active voice in the scientific literature of animal experimentation, research, and

management; 2) the equally complete lack of acknowledgment that anything resembling a living, breathing, sentient being is undergoing experimentation; and 3) the purposeful obscuring of language and intent by the persistent use of euphemisms.

This particular experiment investigated possible primary and secondary poisoning to small mammals following "control" of coyotes with lethal Compound 1080 (sodium monofluoroacetate), one of many poisons systematically used in the west to kill wild coyotes in favour of livestock proliferation on public lands.<sup>2</sup> To provide an understanding of the patterns of vocabulary and syntax involved, I quote from the article at length:

Methods - Striped skunks, raccoons, and opossums were live-trapped in east central Texas and housed outdoors in individual cages. Test animals were provided 500 g commercial dry dog food once a day and a continuous water supply. The animals were acclimated for a minimum of 10 days prior to testing. All testing was conducted during an ambient temperature range of about 23-27 C.

Five coyotes were administered doses (oral gavage) that simulated those a coyote could possibly receive from field use of 1080 for predator control...Upon death, coyotes were skinned, eviscerated, and myectomized. All muscle tissues were combined and ground in a commercial meat grinder. The viscera, excluding the gastrointestinal tract, were prepared similarly. These ground tissues were labelled, packaged separately, and frozen for later feeding to the test animals.

The test animals were fasted for about 24 hours before being presented with 100 or 200 g of ground tissue. Water was provided ad libitum, and no other food was available. Test animals were returned to the standard diet of dry dog food after the ground tissue was consumed. Only animals that consumed 85% of the presented tissue within 12 hours were considered in the analyses (3 skunks refused to eat, and 4 skunks and 4 raccoons could not consume the required amount because it spilled through their cage floors). The animals' reactions were monitored every 4 hours until death or recovery, which was, for the purpose of this study, considered complete when [those not dead] showed no clinical signs of 1080 intoxication and had returned to...normal feeding habits by the end of a 4-day observation period.

Acknowledgments - We thank T. Blankenship for aid in dosing animals and L. Robinson for processing coyotes. We are grateful for the partial financial support from the U.S. Fish and Wildlife Service which made this study possible.<sup>3</sup>

It is indeed a passive, soulless voice which science presents in its literature on animal research, perfectly reflective of a mode of thinking that proceeds outside the moral realm of active responsibility. Other than in the acknowledgments, not one human "I" or "we" - man, woman, scientist, or biologist - appears as the subject, as the doer of the deeds. That traditional position of responsibility, the head of the sentence, is granted instead to the animals. And when the human "we" finally does appear in the acknowledgments, it is not gratitude to the animals that is expressed for giving, albeit unwillingly, of their bodies and their lives, but rather to the two people who "dosed" and "processed" them.

## Masking the Unpleasant or Unethical

Except perhaps for bureaucrats and politicians, scientists are unparalleled in their ingenious use of euphemisms to shield themselves from accountability and moral responsibility for their actions. Modern linguists have even created a word for it, "doublespeak," the obfuscation of language in order to deny or shift responsibility. Many successful endeavours in public relations and, no doubt, self-deception have employed the technique. Use of euphemisms in doublespeak allows the negative to appear as positive, the unpleasant as pleasant, the unethical as ethical, and where expedient, vice versa. With such sleight of word, doublespeakers are able to avoid or even conceal the jarring or unsettling truth of a situation, averting critical thought and debate - including, of course, within their own professions.<sup>4</sup>

Thus, in the language of field biology, coyotes and other wild animals are not victims of research to be caged, poisoned, manipulated, and possibly killed. Instead, they are "test animals" which are "housed," "dosed," and "processed" - rather like an innocuous manufacturing process, perhaps of cold cuts or Velveeta. Likewise, coyote "control" has replaced the more distasteful (and accurate) coyote killing; mammals are now clamped by their legs for capture or death in "Soft-Catches," padded steel traps; and "nuisance animals" (i.e., those whose behavior has been found offensive to humans overtaking their habitat) are "relocated" or "translocated" rather than banished from their territories and social groups - usually after being darted, drugged, caged, and hauled by their bellies from a helicopter.

In a similar abuse of language, wildlife managers "thin out" and "harvest" elk and deer, corn-like, to build a case for renewable resource funding, while researchers, in killing what they consider a "scientifically admissible" percentage of their animal subjects for data accumulation, "sacrifice" them instead - surely a perversion of the original meaning of the word, derived as it is from the Latin *sacrare*, a sacred homage to a higher being. In this case, no doubt, the deity is Science. And that deity has shown, through the deliberate misuse of language by its devotees, that in the realm of scientist/animal relations it rewards efficiency, objectification, and disconnection above all else.

## The Descent from "Thou" to "It"

Since language structures hold such subtle yet powerful influence on cognitive life, science has successfully established, and the public has for the most part unconsciously accepted, linguistic strategies which diffuse ethical questioning and maintain the ideologies and agendas of those in power. Thus, while early hunters once spoke of all animals, indeed all life forms as "thou," worthy of ritual and respect, their modern counterparts - scientists armed with dart guns and data sheets - have been linguistically trained to regard non-humans as non-entities, or at best, lower forms of life ("ground tissue") to be manipulated and controlled.

**Que animo?** With what spirit or intention? In regard to research on wild animals, those intentions are often not acknowledged nor clear, obscured by the profession's deeply ingrained linguistic habit of passive voice and euphemistic deception. For in its presentation of wildlife experimentation and research, whether specific research is justified or not, the language of science has consistently failed to call it as it is: violence to animals.

## Notes

1. Refer to Kramarae (1981, 1984) for a thorough examination of language and social stratification.
2. Ditzler (1979) accurately calls Compound 1080 "a master poison, an assassin's elixir." A single ounce can kill 20,000 coyotes.
3. Beasom and Eastland (1986, p. 232).
4. Lutz (1989), who gives out annual doublespeak awards from his English office at Rutgers University, believes that "things are getting worse all the time. Doublespeak is all around us."

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# REGENDERIZING OTHER ANIMALS AS "SHE"

Carol Cina

"Subvert the dominant paradigm." Earth First! bumpersticker

## Introduction

Early one hot morning in July I took a friend along on my daily prowl through my eggplant, squash, and tomato jungle in search of six-legged vegetarians. As I plucked an iridescent beauty from the waist-high greenery and held her up for my city dwelling companion to see, I said "Look at how the greens and shades of bronze in her carapace shine." "How do you know it's a she?" replied my friend, uttering the words I inevitably hear when I refer to other animals as "she." Nature, gender, and language coalesce among the vegetables to say how we humans think of ourselves in relation to the rest of nature, revealing the lines of that domination which Rosemary Radford Ruether has rightly called the fundamental model of relationships in our culture.<sup>1</sup>

I have had a version of this exchange with many people in many different settings, with essentially the same response regardless of age or gender of the speaker. Their factors in common have been that they all spoke English and they all shared with me an education in the dominant paradigm of Western industrialism.

Belief in the rightness of the power of a human being over the rest of nature, other human beings included,<sup>2</sup> is a central feature of this paradigm. Regulation of activity by the clock, science, the nation-state, division into mental workers and manual workers, the social legitimacy of hierarchy - all the intricacies of form and ritual in which our daily lives are played out - are the interlocking pieces of its structure.

A deadly spectre now haunts this paradigm. It is the spectre of non-sustainability. The planet can no longer pass the usual proportion of the sun's energy back into space. Due to changes in the gaseous composition of the atmosphere caused by industrial activities carried on by humans, Earth now holds a greater proportion of that energy close to its surface. Ozone molecules in the planetary radiation shield are dissolving en masse due to reactions with such chemicals as keep refrigerators and structural interiors cool for the small percentage of humans

who possess refrigerators and air conditioners and electric service to run them.

There is no need for another recitation of the wanton squandering of Earth's one-time capital that has been the hallmark of the industrial ways of humankind. Nowadays it seems necessary only to point the finger to raise the spectre of the inability of the environment to sustain business as usual. Agreement is gathering that changes on the part of humans are now necessary, as it appears we have even begun to push the limits of our own species survival. We have ambushed ourselves in our own den; it is urgency, not morality, which now propels us into action. I agree wholeheartedly with those who argue that these changes need to be of the character of a paradigm shift, a thorough and profound transformation of the underlying ideas which organize our activity.<sup>3</sup> It is my opinion that a crucial feature in this paradigm shift has to be a change in what we Westernized humans see as our real and proper relation with the rest of nature. This change would, I believe, necessarily drag along with it changes in the intimately associated matter of relations among humans.

According to the dominant paradigm, humans are different from and superior to all other biota as well as to the non biological components of the ecosphere. It is for this reason that humans should dominate and control all of nature. Feminist philosopher Karen J. Warren has characterized such linked assertions as "the logic of domination" which transforms difference into reason for subjugation. She argues persuasively that since the subjugation of women by men and the subjugation of nature by humans are interconnected at the conceptual level - as are all the disgraceful better-than-therefore-aboves which are the social mortar in our dominator model - a delegitimation of one is a delegitimation of all.<sup>4</sup>

## The Point, However, Is To Change It

The strategic question, then, is where best to pick away at the logical monolith. I submit that the dogma of human entitlement to domination over the rest of nature, rock-hard as it may seem, can be treated as a fracture plane in our belief structure, using



language as a chisel. The time is ripe. Ecological awareness has perforce been sharpened. If the seeming reasonableness of the logic of domination has been weakened anywhere, let us move right in to the weak spot and expose its fraudulence in general.

The contemporary Western idea that it is appropriate for humans to take an attitude of domination toward the rest of nature has two complementary historical origins. An emotionally gripping religious current five or so millennia long connects us with the patriarchal cultures of the first large agglomerations of humans in Mesopotamia. Its caveat is encoded in the biblical story of why we are here: Humans are supposed to rule the Earth and all that moves upon it. Third century B.C. Greek philosopher Aristotle supplied secular reinforcement by teaching explicitly that nature should serve humans. Church scholars in medieval Europe later used his writings to interpret the Bible to succeeding generations of the faithful. The effect of Aristotle's teachings about the natural environment was evaluated by classical historian J. Donald Hughes as "of incalculable influence in later times."<sup>5</sup> Aristotle "adopted a consistently teleological interpretation of nature which prevented many ecological insights and established an anthropocentric and utilitarian attitude toward nature"<sup>6</sup> in Western thought. All things were created for a purpose, namely the service of humans. (Or did Aristotle really have in mind male, non-slave humans?)

The religious stream was made the topic of lively discussion when historian Lynn White, Jr. called it an historical root of the contemporary environmental crisis. Addressing a meeting of the American Association for the Advancement of Science, he said that the Judeo-Christian dogma of human superiority over the rest of nature has to be jettisoned before we can expect much improvement in our rapacious participation in the ecosphere.<sup>7</sup>

Reflecting on the genesis doctrine of human dominion as interpreted in the light of Aristotelian teleology, Hughes concluded that "no more effective combination of ideas to encourage the untrammelled exploitation of the Earth's natural resources can possibly be imagined."<sup>8</sup>

It is clear that language plays a key role in the way humans construe reality. We interpret our world with linguistic, visual, tactile, olfactory, aural, gustatory, and affective systems, but in the end we say what reality is and believe that reality is what we say it is. There are many ways of saying the idea of human domination over the rest of nature. There are also many ways of un-saying that idea, an act which has two main effects: It expands the boundaries of our ethical community to encompass more of the ecosphere of which we humans are a constituent part, and it simultaneously undermines the moral grip of the idea of human over other human.

That is what the tale which began this paper is about. In it is a simple action that can open human minds to examination of what it is we assume about ourselves in nature. I call that action **regenderizing**. By that I mean routinely calling other creatures "she," not "it" or "he." I find that regenderizing the non-human inhabitants of our biosphere rattles sacred cow assumptions and causes thought.

### Language Constructs What's Out There

Humans habitually make value statements in code, usually without awareness of doing so. The words that we choose embody adherence to multiple sets of values. Indeed, the study of what language has to do with how we know and what we know has gainfully occupied many an academic.

Linguistic anthropologist Edward Sapir has proposed that "language is on its inner face the mold of thought"<sup>9</sup> and "actually defines experience for us."<sup>10</sup> Pioneering epistemologist Benjamin Whorf concluded that language "builds the house of [our] consciousness."<sup>11</sup> Together, Whorf and Sapir advanced the hypothesis that the words we use do not simply reflect the content of reality but create our ideas of that reality as well. They assessed language to be the major link between practice and conceptualization, which influences processes passing in both directions. Insofar as our conceptions of social reality are expressed in language, **language is at once constitutive of social reality and reflective of it.** Language is not private behaviour. Language is first and last social behaviour in which we act on the basis of agreed-upon meanings, both denotative and symbolic, where both the agreements and the meanings can be either overt or covert. "Even comparatively simple acts of perception are very much more at the mercy of the social patterns called words than we might suppose,"<sup>12</sup> Sapir cautioned.

Because of its power to shape consciousness, language is able to create a startling perturbation in habitual concept upon occasion, as the conversation I described illustrates. Every time a ripple of dissonance can be stirred into background assumptions about the relation of our human selves to the rest of nature, an opportunity opens up for increasing **critical awareness** of those assumptions and illuminating their connections.

It is no small achievement to suddenly focus the attention of a couple of humans on the nature of an insect, a creature neatly filed away among the inferior. If I had referred to the insect as "it" or "he," my companion would not have noticed or commented, for that is the expected communication. A tiny piece of language has thus created a small temblor in the assumed pattern of construing reality. Every earthquake counts. You never know how thorough a shaking up will happen until the aftershocks are over.

### An Analytic Framework

Extrapolating from an analytic scheme in formal logic called the theory of logical types, philosopher Gregory Bateson created a three-tier framework that is a useful approach to the problem of elucidating the dynamics of human communication. He proposed that human communication is organized into levels of abstraction which are in a "meta" relation to each other: Each succeeding order of abstraction is a comment upon or a modifier of the classes of information it subsumes and cannot itself be one of those classes. Distinguishing between levels creates clarity and preserves logic. Confusing the levels can create humour or paradox or derangement. Using Bateson's categories to analyze the exchange of communication in the garden produces a lush counterpoint of meanings not usually noticed while speaking or even afterwards.

The three levels of communication at work when we choose our pronoun to refer to another creature are (a) message (or denotation), (b) metamessage (or context of the message), and (c) meta metamessage (or context of the context). A metamessage is separate from but impinges on the meaning of the message.<sup>13</sup>

In this instance, we have three distinct possibilities for message - three different pronouns to choose among. Each choice will carry as metamessage a context of meaning - the various connotations of the word which imbue it with signification beyond its literal denotation. These are the socio-cultural assumptions

stored within its paltry two or three letters. In turn, each of these unspoken assumptions itself issues from a comprehensive ontological position, the meta message, also unspoken but carrying meaning to the informational levels it subsumes.

First, the word carries a message which is its literal denotation: gender specification ("she," "he"), absence of gender ("it"), even absence of life ("it"). Second, the word chosen implies a meta message, a message about the message. Let us examine each word in turn for its meta message.

### Metamessage

What is the meta message embracing the message that the insect in the garden is thought to be without gender or perhaps even without life? First of all, the insect is decisively not like me, for I do have gender and I am alive. The meta message says that we are qualitatively different, step one in the justification of domination hierarchy. Since an "it" also has the character of an object rather than a living being, we are impelled by culturally ingrained value dualism to impute moral superiority to that which is alive. We then tumble into an intellectual and emotional wellspring of justification for control over the insect. No need to treat the insect as an agency of consequence in the biosphere. I, the intentional and sentient mammal, am as distanced from the insect as a B-52 bombardier is from the ground-dwellers below. Thus the insecticidal chemical warfare whose myriad undesirable consequences Rachel Carson imploded into public awareness in 1962.<sup>14</sup> Once the insect's moral considerability has been located outside the perimeter inside which I stand, it seems my ability to grasp the meaning of our relation becomes impaired. The meta message of "it" draws the line of interspecies value hierarchy between us.

What then is the meta message conveyed by "he"? Personally, my hackles rise when I meet the generic masculine: I am endangered by the context of its message. Who do you picture doing the acting when you say "he"? A male example of the species, of course. It would appear that males do all the acting in this world. Some generic it is which so slanders the type. The meta message of "he" is ripe essence of patriarchy: Males dominate. At the other end of the dualism seesaw, females automatically land in the subordinate role, and the big picture of human-to-human relations is suddenly projected for yet another ritual of acquiescence.

I believe this to be the entire point of the generic masculine. Just as a human child recites the lessons of propriety in her or his culture through imaginative play with representations of characters from real life, so too do human adults affirm the patterns of social ordering through endless iterations. It's a kind of pheromone substitution. We can't use the ant's method of recognizing who is in the group. Our method requires linguistic declarations.

It matters not that the child's stick figures are not people. It matters not that an insect remains classified among the subordinate despite the "he" appellation of supremacy. It's like the moon illusion. A full moon just rising, juxtaposed with treetops, looks large enough to swallow the Earth. By the time it reaches its zenith, alone in a vast sea of space, it appears quite small, yet in both instances it subtends the same angle at the point of observation. Visual cues determine our sense of size of moon; as associated objects change, so does the size we "see." As tree silhouettes cause the moon to look large, a human referent for "he" causes agency to be ascribed in quantity. An insect, how-

ever, is a cue that agency is now small - vanishingly so - even though the same word "he" is applied. Prior definitions determine whether "he" confers agency on the referent, just as prior definitions determine that generic "he" asserts the relation of domination of male over female.

Only when the insect is thought of as female in gender and therefore spoken of as "she" are reactions not prescribed by layers of cultural conditioning. "She" in this setting dissolves the sacred principle of ordering for the purpose of dominating. In this setting the word cannot tap prescribed meaning from the great subterranean aquifer of cultural assumptions, for there is no formulation there of any such meaning attached to this word in this type of setting. The meta message is puzzling. We automatically accept the idea of the insect being an "it" or a "he" but react with surprise, even challenge, to the idea that the insect is a "she." Regenderizing the insect is heresy. Has anyone ever said to you "What do you mean, it? Surely that insect has gender and is alive." Or "How do you know the insect's a he?" Not very likely. Why not? Because cultural norms don't get challenged unless someone is out to change underlying assumptions. Calling an insect "she" is not common, ordinary, amiable conversation. Its meta message is that we are not, after all, who we thought we were in relation to each other and the rest of nature. The word rings an alarm to awaken consciousness of there being such a question to ponder.

Deprived of the preconceived and buried slot to fit the insect into, we can only react in non-prescribed ways. Maybe deep thinking will blossom forth and pollinate changes. Maybe not. But even if "she" accomplishes nothing more than raising a shield of question marks to interrupt the automatic "kill it" response so commonly experienced by industrial-culture humans in the presence of an insect, the utterance will at least provide an event to reflect upon.

Second-guessing the situation is not to the point, however. The point is to create a situation in which the human is called on to become conscious about her or his relationship to the insect, for lurking in each message and its accompanying context is a person's broad vision of the nature of existence, and it is this to which I suggest access is urgently needed.

### Meta Metamessage

Ontological statement is the third level of communication about the insect. With each use of pronoun, the speaker indicates adherence to an all-encompassing explanatory picture of the way things are and should be in the world. Both "it" and "he" declare loyalty to the concept of human/nature discontinuity, an epistemological tragedy leading us to understand our surrounds as property. Only "she" exits the dominant paradigm and treads a deviant ideational path regarding how to think about knowing the world and acting in it.

I propose that "she" in the garden is spoken from a vision of some type of unity in nature - lithosphere and biosphere, hydrosphere and atmosphere - a removal of the ontological divisions which have been inserted into our cultural stream by means of thousands of years of insistent propagandizing. Feminist scholars who have recently interpreted artifacts previously recovered but not understood by patriarchal scholars conclude that for many millennia before their conquest by patriarchal peoples, the cultures of Old European and Near Eastern human settlements seem to have featured a sense of oneness with the rest of nature, cooperative social organization, and goddess-

centered imaginative life.<sup>15</sup> Marija Gimbutas, the archaeologist pioneering this reformulation, thinks this extended "probably into the Paleolithic era, which goes back to a million years ago."<sup>16</sup> It is a very old vision, perhaps - who can know - the original species understanding descending from the accumulated "knowledge" of the primate small group.

It is an orientation in which relationship and pattern are taken as primary visions of reality. "We are shown that our life exists with the tree life, that our well-being depends on the well-being of the Vegetable Life, that we are close relatives of the four-legged beings,"<sup>17</sup> say the Haudenosaunee people (Six Nation Iroquois Confederacy) of the northeastern North American continent. They say they see "the modern world through Pleistocene eyes"<sup>18</sup> because "our culture is among the most ancient continuously existing cultures in the world."<sup>19</sup> They say that "vertical hierarchy creates conflict."<sup>20</sup>

Their message is not so very different from the contemporary cybernetic approach, where reality is envisioned as patterns of relations in which change in one part of the system bears consequences for properties of the system as a whole. Biologists use the cybernetic language of feedback loops to describe the self-organization found throughout nature. The familiar linear path of cause and effect, with beginning and end, is reconceived as a snipping out of informational route which is normally recursive. Thus, to intervene in the nitrogen cycle by pouring chemical fertilizer onto the ground is error: Vegetables grown there contain disease-causing levels of nitrates, soil structure is flattened, and aquifers are polluted. It was supposed to end in happy plants. But nitrogen doesn't "end." The error is in how we think about ourselves in relation to the rest of nature. Large-brained we may be. But we are also small of tooth and furless. Our scientific and technical Maginot Line has been breached. Our industrial addiction has bred affective ignorance: We can know without caring.<sup>21</sup> We reckon price (money) but not cost (consequences of our interventions).<sup>22</sup>

Saying "she" might lead nowhere, like the skin of a bag of air momentarily blown into a wad of bubblegum only to be sucked back into the blob to become indistinguishable from it for we are too good at shrugging off inconsistencies. Or, regenderizing might contribute to a process of subversion and recreation.

Most of us learned from a children's story that although it is an act of subversion to see that the emperor's clothes are not what they were publicly agreed to be, it is an act of salvation to go public with that observation. It is an act of subversion to break with cultural agreements about what is what, especially the covertly-held kind, because it is then possible to reformulate just what is being seen and how the seeing takes place. Who controls the reformulation? Paradigm change always undermines business as usual.

I offer regenderization as a small step in the direction of developing new patterns of thought, based on its demonstrable ability to crack open an entry into the realm of how we understand the world to be put together.

### Biological Reality, Human Imaginings

I should not neglect to mention that calling another biological creature "she" is at least as close to the factual mark as is the other gender alternative. Biologists have worked on the theoretical concept of an expected 50-50 sex ratio among animals visible to the unaided human eye since biologist Ronald A. Fisher first proposed the idea in 1930.<sup>23</sup> Fisher's view was one of long-run

homeostasis, in which natural selection favoured whichever gender was momentarily - in geological nanoseconds - in significantly shorter supply.<sup>24</sup> If evidence is wanted that nature does not define for us any logic for preferentially calling another creature "he," there it is.

We have not the logic of nature, but the imperatives of culture, for creating a scheme of values in which we see ourselves as sitting atop a heap of more "lowly" creatures, who sit atop non-biological configurations which it is our "right" to tear apart as we see fit. Using this word rather than that word can throw a sabot into the conceptual machinery. The large task is to undermine the comprehensive system of ideas and institutions, social arrangements and their justifications, which have issued forth in the situation of a few humans on the planet controlling the decision-making which pollutes and depletes as it temporarily makes them powerful and rich.

How to start? May I suggest that sometime this week you try for yourself the thought that the insect you see perched on a leaf or flying about your nose is a "she"? The crucial part, however, is to not keep it to yourself. Try referring to that insect as "she" in conversation with another person. The creature does not have to be an insect. A squirrel or a snake or a spider will do just as well. See what happens. See if you find the connections there which I have found. See if you think it matters what we say. See if you think regenderizing is worth a try.

### Notes

1. Rosemary Radford Ruether, *New Woman/New Earth: Sexist Ideologies and Human Liberation* (New York: The Seabury Press, 1975).
2. Thus do I decline engaging the debate over which form of socially constructed domination came first - that of humans over nature or that of male humans over female humans. My own position is that there is no way ever to know. Indeed, why should we suppose that there is a mother of all hierarchies manifesting itself across diverse human cultures?
3. See, for example, Fritjof Capra, *The Turning Point: Science, Society, and the Rising Culture* (New York: Bantam Books, 1983); Riane Eisler, *The Chalice and the Blade: Our History, Our Future* (San Francisco: Harper & Row, 1987); Marilyn French, *Beyond Power: On Women, Men, and Morals* (New York: Summit Books, 1985); James E. Lovelock, *Gaia: A New Look at Life on Earth* (New York: Oxford University Press, 1979) and *The Ages of Gaia: A Biography of Our Living Earth* (New York: Bantam Books, 1990).
4. Karen J. Warren, "The Power and the Promise of Ecological Feminism," *Environmental Ethics* 12 (Summer 1990): 125-146.
5. J. Donald Hughes, "Ecology in Ancient Greece," *Inquiry* 18 (Summer 1975), p. 124.
6. *Ibid.*, p. 122.
7. Lynn White, Jr., "The Historical Roots of Our Ecological Crisis," *Science* 155 (March 10, 1967): 1203-1207.
8. J. Donald Hughes, p. 124.
9. Edward Sapir, *Language: An Introduction to the Study of Speech* (New York: Harcourt, Brace and World, 1921), p. 22.
10. Edward Sapir, "Conceptual Categories in Primitive Languages," in Dell Hymes, ed., *Language in Culture and Society: A Reader in Linguistics and Anthropology* (New York: Harper & Row, 1964), p. 128.
11. Benjamin L. Whorf, "Language, Mind, and Reality," in John B. Carroll, ed., *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf* (Cambridge, MA: The M.I.T. Press, 1956), p. 252.
12. Edward Sapir, "The Status of Linguistics as a Science," in David G. Mandelbaum, ed., *Selected Writings of Edward Sapir in Language, Culture, and Personality* (Berkeley and Los Angeles: University of California Press, 1958), p. 162.
13. See Gregory Bateson, *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology* (San Francisco: Chandler Publishing Co., 1972) and *Mind and Nature: A Necessary Unity* (New York: E.P. Dutton, 1979).
14. *Silent Spring* (Boston: Houghton Mifflin, 1962).
15. Marija Gimbutas, *The Gods and Goddesses of Old Europe, 7000-3500 B.C.: Myths, Legends, and Cult Images* (Berkeley and Los Angeles: University of California Press, 1974) and *The Language of the*

**Goddess** (New York: Harper & Row, 1989); Merlin Stone **When God Was a Woman** (New York: Harcourt, Brace, Jovanovich, 1976).

16. Interview by Joan Marler entitled "Archaeomythology," **Woman of Power** (Fall/Winter 1990) p. 11.

17. **A Basic Call to Consciousness: The Haudenosaunee Message to the Western World** (Akwasasne Notes, 1978), p. 49.

18. *ibid.*, p. 48.

19. *ibid.*, p. 49.

20. *ibid.*, p. 47.

21. My thanks for this concept to Mary Catherine Bateson, whose carefully thought-out book **Our Own Metaphor: A Personal Account of a Conference on the Effects of Conscious Purpose on Human Adaptation** (New York: Alfred A. Knopf, 1972) is a treasure-trove of discussion on the thesis that "our failures in relating to natural processes stem from systematic distortions in the way we think and talk about such processes." (p. 148).

22. For a unique and important illumination of the dismal science, see Marilyn Waring, **If Women Counted: A New Feminist Economics** (New York: Harper & Row, 1988).

23. R.A. Fisher, **The Genetical Theory of Natural Selection** (Oxford: Clarendon Press, 1930).

24. David O. Conover and David A. Van Voorhees, "Evolution of a Balanced Sex Ratio by Frequency-Dependent Selection in a Fish," **Science** 250 (December 14, 1990): 1556-1558; Michael T. Ghiselin, **The Economy of Nature and the Evolution of Sex** (Berkeley: University of California Press, 1974); W.D. Hamilton, "Extraordinary Sex Ratios," **Science** 156 (April 28, 1967): 477-488; Charles J. Krebs, **Ecology** (New York: Harper & Row, 1985); Ernst Mayr, **Animal Species and Evolution** (Cambridge, MA: Belknap Press, 1963) and **Populations, Species, and Evolution** (Cambridge, MA: Belknap Press, 1970).

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## THE BIOLOGICAL FALLACY: LIFE = ORGANISMS

Stan Rowe

Whatever that mysterious organizing negentropic principle called "life" may be, its immediate source is clearly the Ecosphere. Ecology demonstrates that organisms and their earthly matrixes are symbiotic and inseparable, differentiated only by our cheating sense of sight. A creative animating process, life is an expression of the Blue Planet and its 4.6 billion years of evolution. The Biological Fallacy, equating organisms with life, is the result of a faulty inside-the-system view.

Consider the different experiences of seeing a system from the outside and from the inside. Looking through a microscope at a slice of plant tissue the student sees spaces bounded by walls and knows, from the instructor, that s/he is seeing unitary things called cells. Next, looking within, s/he is mentally prepared to see parts: nuclei, plastids, mitochondria, starch grains, streaming cytoplasm, particles dancing in Brownian movement. Note that the identification of parts is contingent on prior definition of the whole - as shown by a simple thought experiment. Suppose that instructor and student, before seeing cells from the outside, were reduced to microscopic size and placed within a cell. The teacher hands binoculars to the student and asks, "What do you see?" Sight from within particularizes; lacking the outside perspective that reveals the whole, the student will see the cell contents as separate and unconnected objects. S/he might then logically identify the dividing, reproducing organelles as **alive** and their cytoplasmic matrix, vacuoles and plasma membrane as **dead**. The idea that the totality is alive, so obvious from the outside, is not apparent.

For thousands of years we people have been viewers immersed in the Ecosphere, deep-air animals living at the phase boundaries where air and water meet land, mistakenly identifying all manner of things as "organic" and "inorganic," "biotic" and "abiotic."

"animate" and "inanimate," "living" and "dead." Dictionaries full of nouns show the efficiency with which we have thought the world to pieces. Around our ignorant taxonomy we have constructed religions, philosophies and sciences that fragment and departmentalize a global ecosystem whose "aliveness" is as much expressed in its improbable atmosphere, crustal rocks, seas, soils and sediments as in organisms. When did life begin? When the Ecosphere itself was born, if not even earlier. The idea that vitality characterizes the Ecosphere rather than just its organic parts illuminates many bright ideas that the lack of a reasonable context has dulled - Bateson's "pattern-that-connects," Sheldrake's "morphogenetic fields" - for the Ecosphere is an organizing entity. It is not a super organism, it is **supra-organic**: a higher level of organization than plants and animals, including people. The lively Ecosphere gives the lie to those who see the world's reality as little more than a competitive arena, for without compliant cooperation among its multitudinous parts the diversifying creativity of the planet could not have evolved, nor could its over-all homeostasis continue.

When life is conceived as a function of the Ecosphere and its sectoral ecosystem the subject matter of Biology is cast in a bright new light. Where should the preservation emphasis lie, on earth spaces or on earth species? Think of the implications of denying that Life = Organisms and of putting animation where it belongs!

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# GAIAN INTEGRITY: A CLARION PRECEPT FOR GLOBAL PRESERVATION

Robert L. France

Historians, both professional and dilettante, are often intrigued with investigating the ontogenetic roots of emerging ideas (Colingwood 1956). In particular, identifying the ascription of a name to a conceptualization, is believed important in tracing the evolution of that paradigm. Etymologically mapping the dynamics within a lexicon can therefore facilitate its understanding. The last decade has seen the introduction into the environmental movement of two very important expressions "integrity" and "Gaia", both now becoming firmly established within the vocabulary of many environmental ethicists. As these terms appear to be on the verge of approaching buzz-word status (Regier 1987; Schulze 1987; McLeod 1988; Dyer 1988),<sup>1</sup> I thought it profitable to forward examples of their use antecedent to the commonly held belief of their origin. Because of a rapidly expanding and quite diverse literature, I have included numerous references to augment further research by others on these topics, and have purposefully selected a non-specialist journal as the forum for these ideas.

## Organic Integrity

In 1949, the pioneer American conservationist Aldo Leopold published (posthumously) his collection of essays entitled, *A Sand County Almanac*, in which he stated his single ultimate moral principle:

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.

Considered to be Leopold's most controversial philosophical remark (Moline 1986) this maxim represented the refinement of nearly thirty years of environmental thinking toward his "Land Ethic". As a result, these lines have become the most widely quoted of the entire Leopold corpus (Flader 1987; Losin 1988). The first published version of this imperative appeared in 1947 and its roots can be traced back to Leopold's earlier formulations of his ethical philosophy during the 1920's. Although he never explicitly defined what was exactly meant by "integrity", Leopold (1949) did provide some hints:

All ethics rest upon a single premise: that the individual is a member of a community of interdependent parts...we must realize the indivisibility of the earth - its soil, mountains, rivers, forests, climate, plants, and animals, and respect it collectively not as a useful servant but as a living being.... The land is one organism. Its parts, like our own parts, compete with each other and cooperate with each other. The competitions are as much a part of the inner workings as the cooperations.... These creatures are members of the biotic community and if (as believed) its stability depends on its integrity, they are entitled to continuance.

Both Flader (1987) and Hefferman (1982) believe that by "integrity" Leopold was referring to the wholeness or diversity of the biological community, its characteristic structure, and in terms of management (his profession), the implicit precept was to attempt to restore, insofar as possible, all species still extant that evolved together in a particular biota. Once the land could be popularly perceived as it was professionally perceived in ecology - as an integrated community - Leopold hoped that it would follow that a type of land ethic would naturally emerge into the collective cultural consciousness (Callicott 1987). This is what Deroches (1988) is referring to when he states: "Community is perhaps our greatest hope. From community can come the capacity for deep ecumenism, which can release the collective wisdom and passion we need to heal the Earth and ourselves."

The interdependence of biological communities had been recognized since the time of Hellenic naturalists (Hughes 1981), and was firmly established in ecological theory when Leopold was grappling with his Land Ethic. Consequently, the stability-diversity coupling has become a persistent and pervasive theme in theoretical ecology. In contrast, the term "integrity" has received only intermittent attention (Hefferman 1982) until recently (Karr 1990, France & Sharp 1992) Integrity is now becoming ensconced as a directive concept in current environmental decision-making (Cowan et al. 1990; Westman 1990; Serafin 1990), as well as surfacing as an operationally defined managerial tool in biomonitoring protocols (France, 1990 & 1992), the latter being viewed as a surrogate for ecosystem "health" (Steedman & Regier, 1990). Following the lead of the U.S. Fed. Wat. Pollut. Control Act of 1975 (Ballentyne & Guarria 1975; Regier & France, 1990), the International Joint Commission reaffirmed in 1978 that the two countries must insure that, with regard to the Great Lakes, "the biological integrity of these waters is maintained".

Although Leopold's conceptualization of the Land Ethic can be traced to such diverse sources as Thoreau's pantheism, Schweitzer's Reverence for Life, Ouspensky's world view, Darwin's biological interdependence, and Native American's code of land respect (Nash 1987; Callicott 1987), is there any precedent for his transposition of what is essentially an anthropocentric word symbolic for qualities of honesty, consistency, reliability, truthfulness and autonomy (McFall 1987; Lerner, 1990) to environmentalism, be it a property either intrinsically or latently applied to nature by humans (Serafin, 1990), or is Leopold indeed the first to advance its use in such a fashion?

A recent rereading of an unpublished manuscript of mine (France 1984) submitted over a half decade ago for an environmental philosophy course at the Institute for Environmental Studies, Univ. of Toronto, generated the following, since then forgotten, quote by the West Coast poet-naturalist Robinson Jeffers (1887-1962):

Then what is the answer? - Not to be deluded by dreams/ To know that great civilizations have broken down into violence, and their tyrants come and gone, many times before/...A severed hand/Is an ugly thing, and man dissevered from the earth and stars.../Often appears atrociously ugly. **Integrity** is wholeness, the greatest beauty is/ Organic wholeness, the wholeness of life and things, the divine beauty of the universe. Love that, not man/ Apart from that, or else you will share man's pitiful confusions, or drown in despair when his days darken. **The Answer**, Jeffers (1937)

Jeffers has been regarded as Spinoza's twentieth century evangelist, whose doctrine of "Inhumanism" approached a form of scientifically-based pantheism (Coffin 1971; Sessions 1977; Starr 1977). As Nolte (1978) stated, it is only when we overcome our anthropocentric solipsism that we can begin to appreciate Jeffers' organic wholeness or integrity of the universe and, with this realization, take our own place in the transhuman magnificence of life. This is what Livingstone (1985) means by his expression "ecospheric egalitarianism."

In a 1934 letter to a reader (Rideway 1968), Jeffers provided a sufficient summary of his philosophy of Inhumanism or what I refer to as "Biospheric (or Gaian - see below) Integrity":

I believe that the universe is one being, all its parts are different expressions of the same energy, and they are all in communication with each other, influencing each other, therefore parts of one organic whole. (This is physics, I believe, as well as religion.) The parts change and pass, or die, people and races and rocks and stars, none of them seems to me important in itself, but only the whole.

Several other global thinkers have focused our attention toward preserving Biospheric Integrity, albeit in ignorance of Jeffers' role in originally articulating such a precept. For example:

The total extinction of life is not imminent, though the elaborate forms of life expression in the earth's ecosystems may be shattered in an irreversible manner. What is absolutely threatened is the degradation of the planet's more brilliant and satisfying forms of life expression. This degradation involves extensive distortion and a pervasive weakening of the life system its **comprehensive integrity as well as its particular manifestations...The entire earth is a gorgeous celebration of existence.** (Berry 1987)

Recently, the World Council for the Biosphere, recognizing that the need to "safeguard the Biosphere and maintain its **integrity** in every possible way" has become the "greatest imperative of our time", specifically identified the word "integrity" in fully three of its seven main objectives (Polunin & Grinevald 1988). As the British director of the Friends of the Earth identified (Porritt 1988) the goal is the pressing need to reintegrate ourselves with creation" (c.f. Schulze 1987). How then can this be accomplished?

### Life Beauty

Several have pondered the somewhat forced compartmentalization of Leopold's three cardinal tenets (Hefferman 1982) as well as questioning as to why there appears to have been only scant attention directed to "beauty" in discussions of the Land Ethic by either Leopold or his followers. Serafin (1987) open-endedly concluded: "A final thought harks back to Aldo

Leopold. If stability and integrity of society and nature really do come together in a wider notion of rehabilitation called sustainable development, I wonder where that leaves beauty."

In the end, it is precisely such an interlinking of integrity with beauty, as expressed by Jeffers, that must form the true motive power of any land ethic; the precept to manage for values that go beyond those of being merely economic (Flader 1987):

This whole is in all its parts so beautiful, and is felt by me to be so intensely in earnest, that I am compelled to love it...I think that one may contribute (ever so slightly) to the beauty of things by making one's own life and environment beautiful, so far as one's power reaches. (Jeffers in Rideway, 1968)

Galesworthy seems to be suggesting a new concept of evolution, perhaps similar to Teilhard's "noosphere" when he says: "It is the contemplation of beauty which slowly, generation by generation, has lifted man to his present state. Nothing in the world but love of beauty in its broadest sense stands between man and the full and reckless exercise of his competitive greed" (France 1984). With beauty therefore, Jeffers believed, comes love. The Canadian Academy Award winning documentary film about the nuclear arms proliferation (banned incidentally for several years in the United States as foreign propaganda) was entitled - **If You Love This Planet**.

Beauty here does not simply refer to a visual potential engineered by landscape architects in which it represents just another resource (Evernden 1985; 1988). Rather, **true beauty** - Jeffers' "beauty beyond beauty" - goes much deeper and becomes a way of viewing the world through a phenomenological perspective by marvelling at the diversity of creation:

One light is left us: the beauty of things.../ The immense beauty of the world.../ The beauty of things means virtues and value in them./ It is in the beholder's eye, not the world? Certainly./ It is the human mind's translation of the transhuman/ Intrinsic glory. It means that the world is sound./ Whatever this sick microbe does. But he too is part of it. (Jeffers 1954)

Leopold, whether explicitly influenced by his contemporary Jeffers or not (there appears to have been no direct communication between them (Rideway 1968)), also recognized the necessity of this coupling in an unpublished essay in 1938 entitled, **Economics, philosophy, and Land**: "We may postulate that the most complex biota is the most beautiful." Beauty, the sensory experience, becomes beauty, the noetic exercise, with ecology representing the "science of the beauty of the Earth" (Austin 1985). Perhaps nowhere has the need to combine a spiritual mythopoetic admiration with a scientific rationalism been put forward more eloquently than by Einstein:

The scientist is possessed by the sense of universal causation. His religious feeling takes the form of a rapturous amazement at the harmony of natural law which reveals an intelligence of such superiority that compared with it, all the systematic thinking and acting of human beings is an utterly insignificant reflection. This feeling is the guiding principle of his life and work. It is beyond question closely akin to that which has possessed the religious geniuses of all ages.

This is similar to James Watson's reflection on the double helix of DNA: "In science there can be ideas that are too beautiful not to be true...."

Integrity and beauty therefore become synonymous in wonder. Chaitanya (1983) recounts a charming Hindu expression for just such a combined inquiry by feeling and thought that must be applied by today's environmental scientists: "Searching in their hearts with intellect...." Maintaining the characteristic structure of the ecosystem, i.e. its integrity or objective beauty, is the key to preserving its stability.

### Vibrant Terra

In 1979, maverick chemist James Lovelock published his popular book, *Gaia: A New Look at Life on Earth*, offering for many a "new" symbol around which to direct their environmental yearnings. In this work, Lovelock used the word "Gaia" as a shorthand for the hypothesis that "the biosphere is a self-regulating entity with the capacity to keep our planet healthy by controlling the chemical and physical environment."

The scientific background for such a concept was not new: "There is nothing in the Gaia metaphor that has not been utterly familiar to biologists for the whole of this century - except the name [which] adds nothing to these ideas...Gaia is an amusing fanciful name for a familiar concept" (Postgate 1988). In the late 1920's, while associating with Teilhard de Chardin in Paris, the noted Soviet geologist Vladimir Vernadsky wrote *La Biosphere* in which he developed the idea of the biosphere as the "integrated living and life-supporting system of Planet Earth, one that is a stage in a continual evolutionary development" (Serafin 1988). Further, the concept of the Earth as a sort of "super organism" dates as far back as 1785 when it was proposed by James Hutton, one of the founders of geology (Pearce 1988). Recently, perhaps in an attempt to distance himself from the criticisms of those empiricists who regarded the concept of Gaia as "pseudo scientific myth-making" (Postgate 1988), leading to the "latest deification of Earth by nature nuts" (Sagen & Margulis 1983), Lovelock (1988) has coined the term "geophysiology", an issue hotly debated in scientific circles (Shaw 1986; Schneider 1986; Lovelock & Whitfield 1982; Doolittle 1985), whose implications for global environmental action still remain unclear (Myers 1984; Sattaur 1987; Hughes 1985; Murphy 1988; Clark 1983).

When did the actual word "Gaia" first appear? This is how Lovelock describes its origin:

The system seemed to exhibit the behaviour of a single organism, even a living creature. One having such formidable powers deserved a name to match it. William Golding, the novelist, suggested Gaia - the name given by the ancient Greeks to their Earth Goddess. (Lovelock & Epton 1975)

and

By now a planet-sized entity, albeit hypothetical, had been born, with properties which could not be predicted from the sum of its parts. It needed a name. Fortunately the author William Golding was a fellow-villager. Without hesitation he recommended that this creature be called *Gaia*, after the Greek Earth goddess also known as *Ge*, from which root the sciences of geography and geology derive their names. In spite of my ignorance of the classics, the suitability of this choice was obvious. It was a real four-lettered word and would thus forestall the creation of barbarous acronyms such

as Biocybernetic Universal System Tendency/Homeostasis. (Lovelock 1979)

and

My contemporary and fellow villager, the novelist William Golding, suggested that anything alive deserves a name - what better for a living planet than Gaia, the name the Greeks used for the Earth Goddess? (Lovelock 1988)

The impression given here, of course, is that it was Golding who actually first conceived the modern expression "Gaia" as developed from its pre-Hellenic roots. That this has become firmly established in the myths surrounding this paradigm is witnessed by the following reiterations of Gaia's genesis: "Lovelock's book sounded to many readers like myth spinning. Indeed its very title is mythological. Gaia was the Greek's earth goddess, Mother Nature (her name was recommended to Lovelock by a neighbour, the novelist William Golding)" (Weiner 1987); "Golding's choice of the name Gaia for the living entity of Earth is particularly appropriate..." (Hughes 1983); "First expounded in its modern form by the atmospheric chemist James Lovelock, with supporting biological evidence from microbiologist Lynn Margulis, it was given its name Gaia by the novelist William Golding...." (Sagan & Margulis 1983); and "The name Gaia, incidentally, was suggested by William Golding after the Greek Earth goddess, known as *Ge*" (Sattaur 1987).

In an attempt to give credit where it is due, I offer the following antecedent reference to the 20th Century identification of the Earth as Gaia. It has long been my practice to arrange my leisure reading in such a way that in the days immediately preceding November 11, I would be part way through a novel with a strong pacifist message. It so happened that while rereading for the first time in over a decade, Walter Miller Jr.'s 1959 perennial bestseller, *A Canticle for Leibowitz*, I was quite pleasantly surprised by the following passage in which the protagonist contemplates a world on the verge of a second global nuclear war during the third millennium A.D., this time being initiated as a "localized nuclear exchange" somewhere in Asia:

Maniacs! The world's been in a **habitual** crisis for fifty years. **Fifty?** What am I saying? It's been in a habitual crisis since the beginning - but for half a century now, almost unbearable. And **why**, for the love of God? What is the fundamental irritant, the essence of the tension? Political philosophies? Economics? Population pressure? Disparity of culture and creed? Ask a dozen experts, get a dozen answers....He fingered a globe of the world on his desk. He spun it so that the Pacific Ocean and East Asia drifted past. Where? Precisely where? He twirled the globe faster, slapping it lightly again and again so that the world spun like a gaming wheel, faster and yet faster until the continents and oceans became a blur [and] the axial mountings rattled; "days" flitted by as briefest instants - In a reverse sense, he noticed suddenly. If **Mother Gaia** pirouetted in the same sense, the sun and other passing scenery would rise in the west and set in the east. Reversing time thereby....He kept spinning the globe in reverse, as if hoping the simulacrum of Earth possessed the Chronos for unwinding time...to the beginning of Man.

### Gaian Integrity

Pessimists have long argued amongst themselves as to whether the Earth will go "in a bang or in a whimper". On the assumption of the former, many pacifists have sought an ethical foundation

for nuclear deterrence (e.g. Symp. 1985; Gordon 1985; Shaw 1985). Previously, environmentalists have heralded the Gaia image as an ethical basis around which to rally to prevent the gradual erosion of the planet's biocoenosis (Westen 1987; Clark 1983; Myers 1984). What Miller provides us, is an addendum to such an ethical stance for preserving our lonely blue spaceship. To maintain the integrity of the Biosphere (not just as a resource base but as an entity worthy of inherent respect) in the face of both chronic (increasingly becoming realized) and acute (thankfully still potential) insults, is what we should all concern ourselves with as we spin upon Miller's Gaia-globe. As Goldsmith (1988) states, echoing St. Francis' call for "mutual relatedness": "The most fundamental relationship between the constituents of the biosphere [including humans] must be one of mutualism." This is consistent with the present concept of Gaian Integrity.

Somewhat perplexingly, despite dozens of articles published on Gaia since Miller's time, only Clark (1983) and Frank (1982) have carried the metaphor of the Earth Goddess to its logical conclusion as the basis for discussing moral issues of nuclear aggression. The recent production of *The Gaia Peace Atlas* (Barnaby 1988), published following completion of the first draft of the present paper, is the first step in advancement of these ideas to the nonspecialist public. The independent personal discovery of Gaian ethics by such a noted defence critic as Gwyne Dyer (1988) suggests, as he states in his press article, that Gaian beliefs may be on the verge of entering into our cultural consciousness.

One important difference exists, however, in the mindset of Miller's day and that of the present: it is the gradual dismissal of Nietzsche's concept of "the eternal return". Miller (1959) designed his book in the fashion of a grandiose Toynbee-esque cycle, beginning just after the last atomic war and ending with the beginning of another; history ever repeating itself:

Listen, are we helpless? Are we doomed to do it again and again? Have we no choice but to play the Phoenix in an unending sequence of rise and fall? Assyria, Babylon, Egypt, Greece, Carthage, Rome, the Empires of Charlemagne and the Turk. Ground to dust and plowed with salt. Spain, France, Britain, America - burned into the oblivion of the centuries. And again and again and again... Are we doomed to it, Lord, chained to the pendulum of our own mad clockwork, helpless to halt its swing?

Miller's message has been termed "apocalyptic optimism," the book ending on a positive note with the severance of that pendulum's swing. The lesson is clear as Harrison hoped: "with every mistake we must surely be learning." Unfortunately, as we continue our blind march into Frank's (1982) Iron Age of warfare and domination, this despite our current heightened consciousness of the final cataclysmic repercussions of a Nuclear Winter should the unthinkable happen (Grover & Harwell 1985; Westing 1987), we now have sadly come to realize that Miller's Gaia may not get the second (or indeed third) chance that he imagined her to receive. In this respect, Clark (1983) was probably most gravely mistaken when he stated: "It would be difficult, so Lovelock guesses, to wholly unravel the sinews of Gaia [which] is adept at turning 'pollutants' into necessary elements. Gaia would survive, most probably, even a nuclear spasm that eliminated us." For example, as Grover and Harwell (1985) confirm:

We can say with great confidence, however, that the consequences of nuclear war, as we have come to view them, have taken on new and critical dimensions... Nuclear war is no longer only a Northern Hemisphere or human problem; we now have enough evidence to show that the structural and functional integrity of the biosphere is at risk.

Until astronomers tell us otherwise, we must reconcile ourselves to the somber fact that Gaia exists in a plurality of no more than one. In this respect we are all present in the existential field or "Dasein" (Being-there in German; Evernden 1985) of Kundera's "unbearable lightness of being." That "Being," sensu Heideggerian phenomenology (Zimmerman 1985) or nonequilibrium thermodynamics (Prigogine 1980), is Gaia. Whether envisioned as a global cybernetic biogeochemical cycle, or as a new-age sentinace, Gaia is not only all we have, but perhaps all that there is, period. Its preciousness therefore dictates us to be extremely careful.

Ultimately, it is Jeffers' inter-linking of integrity with beauty towards which we must turn for the means essential to guarantee the paramount end - survival of Miller's Gaia. As Jeffers (1941) believed, we must develop

the certitude...that the world, the universe, is one being, a single organism, one great life that includes all life and things; and is so beautiful that it must be loved and revered; [so that] in moments of mystical vision we [can] identify ourselves with it.

This can only be brought about, as the World Council for the Biosphere identified, through continually "stressing and reaffirming our fervent reverence for life as the ultimate deity" (Polunin & Grinevald 1988; Polunin 1988). Life itself then, as Jeffers, Miller, Leopold and Lovelock would all concur, is the supreme representation of what we can comprehend as "beauty." For as Plotinus wrote in the third century A.D. "Without beauty, what would become of being?" (Austin 1985). Finally, there are perhaps no two lines anywhere which more sufficiently encompass the rationale for all the quixotic motivations and Sisyphean efforts of environmentalists/pacifists than those written by Jeffers (1963) in one of his last poems:

It is only a little planet/ But how beautiful it is.

## Notes

1 For example: "Environmental groups and many individual Canadians have struggled for years to retain the integrity of national parks and the integrity of human experience associated with parks. We have lent credence to the mythology of multiple use and preservation. And the integrity of national parks has suffered." (Leckie 1989); and "The integrity of the streams and lake littoral zones must be maintained by reserving a 50 m buffer zone on either side of the stream... This will protect the aquatic and terrestrial components of most amphibian species' habitats... The integrity of the reserved land would be enhanced by large, continuous areas of land rather than numerous, small parcels" (Euler 1983).

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## THE LANGUAGE OF THE ENVIRONMENT

David McMullen

In one of my classes I am writing a paper on land use. The land I was writing about was under-developed. It had had minimal contact with the human community. When my professor marked the outline for the paper she circled two words and stated that I had used them incorrectly. The words were **prosperous** and **productive**. She wrote in the margins that land that isn't under human manipulation can't be prosperous.... It is non-productive. It was her opinion that land that hasn't been brought into an economic sphere has no natural productivity and can't be naturally prosperous.

I am a lot younger than my prof and I've spent a great number of my formative years watching and listening to the growth of the environmental movement. My exposure to the environmental movement has helped to formulate who I am and how I view the world. This vantage is often at odds with those who grew up in a different era when the mindset was different.

The incident with my prof made me realize that the vocabulary and the philosophy of the environmental movement still hasn't managed to weave itself into the instincts of a huge portion of the population. Too many people haven't the personal resources to shift from one mode of living to another. There are people who are incapable of recognizing that the days of the throw-away society are over.

On the other side of the coin, it must be understood that there are those of us who have grown up listening intently to what environmentalists have had to say. We have listened long and hard and because of it the way the world is no longer in synch with previous generations. We don't believe international corporations have got the environmental message, we don't believe the marketplace will meet all the needs of the environment and we don't believe that governments have the character to stand against big business's quest for profit.

There are innumerable instances which illustrate the incongruity of traditional ways of looking at things and the environmental point of view. Another such example: several months ago there was a piece of marshland up Island that the owner wanted to turn into a trailer park. The land was a breeding spot for water fowl and environmentalists fought to preserve the land in its natural state. In a news cast I saw on the issue one of the

gentlemen interviewed regretted that the spot was going to be developed and then he shrugged his shoulders and said "but that's progress." A host of individuals would argue that the preservation of the land in its natural state would be actual "progress". It is at this point that the vocabularies to two opposing philosophies come into conflict.

I myself don't know the answer. What I see though is that some people are still burdened with the misconception that the onward trek of humankind must include the traditional definitions of words such as **productive**, **progress**, and **prosperous**. They still see, in a very crude way, that the mowing down of our natural environment to build yet another mini mall is now and always will be progress. They do not see land as having a natural prosperity and a natural productivity to it. These individuals do not recognize that in this day and age words, such as the ones listed above, have taken on new shades of meaning. The meanings of such words are almost the opposite of the traditional definitions.

Society is still very uneasy with defining where the philosophies and the demands of the environmental movement will eventually settle in the collective psyche. What has occurred though is that the ideas and the beliefs of the movement have partially worked their way into the way individuals conceptualize things. For myself I find that I no longer look at development as a good thing. I find myself highly sceptical when I listen to developers discuss their project as being for the good of the community. I recognize that my view of things has become biased but biased in the non-traditional way. For myself and for a lot of other individuals the environmental movement has been the starting point on the route to developing the structure and the values of a modern society. Environmental philosophy can eventually offer more than the vapid materialism it replaces. This is a truth and it is a truth that is being recognized by an emerging group of intelligent and concerned people.

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# AN ECOLOGY OF STYLE

David Berger

I am a white eagle. My eyes are sharp, from a distance I see the wide sweep of the mountains, and the slow turn of the river. It is rare that I see an object from close up, as does the mouse, or that I examine its details. I sweep down to the ground to pick up prey spotted from a distance. Even so, sometimes I have to land. When I do I alight on an outcropping of rock, or a bare tree branch. My talons are sharp, my wings long. I can not easily walk along the ground; I need air below me to take off. White signifies the light of the north, and wisdom. The northern light is constant and that is why I tend towards the middle ground in things.

There are as many prose styles as there are writers. Yet, in non-fiction writing feelings are down-played in favour of an 'objective' style. This style highlights the idea while discouraging feeling. It assumes an objective writer. It assumes a central self and clear language. It holds to a philosophy of positivism where reason is the route to knowledge. In this world reason, with language as its path, allows us to find, or at least work towards, Truth. But, do we have reason, or does it have us?

The way in which something is written - the style - carries the feelings, while the words - the 'content' - conveys the logic and the reasoning. By discouraging style we say that the ideas are all that matters. However, idea and style can not be separated from meaning any more than one can take the clouds out of the sky; separate light and dark, or remove the sound of thunder from lightning.

## Style and Worldview

**In Literacy and the Survival of the Humanities** Richard Lanham outlines two theories to explain language use: Eden and Post-Darwinia. In Eden language is transparent. The facts of social reality are as clear as the facts of geometry. People are true individuals - separate, self-sufficient: sending, and receiving messages like radio signals, and acting for themselves. Society is the sum of these detachable selves. All that is important is what someone wants **now** - for there is only the present. Language, like Eden's inhabitants, is serious. There is no stylistic display. Because there is a central self people know who they are and what they want. Language's purpose is to lead towards objective Truth. Based on these beliefs of the self in Eden they teach what Lanham calls C-B-S, clarity, brevity and sincerity, a prose style I will talk about later.

On the other hand there is Post-Darwinia. In Post-Darwinia they acknowledge the C-B-S theory of language, but it only accounts for a small part of behaviour. The self in Post-Darwinia is a creation of society. If the social drama stops reality stops - there is no such thing as an individual - everything is relative. Since clarity is not the final goal of language, language contains a great deal of verbal play. Language in Post-Darwinia sustains society. There is no central self, and so no clear message. In Eden people are serious and look down on play, they call it hypocrisy,

pride and sin. In Post-Darwinia feeling is an important part of communication while the language in Eden is serious and rational. In Post-Darwinia all language is a rhetorical device and they acknowledge that human emotion is important.

## Between Thought and Feeling

This rift between thought and feeling is central to prose style, and I want to spend some time here elucidating this supposed gap. It has been looked at from many angles, and numerous explanations have been put forward for differences between them (it is closely tied to Descartes' dualism of mind and body). The important question is not which one do we use, but, which do we **prefer**. The issues are further complicated because the 'separation' of the two is our construction of what we think is out there - there is no proof for their incompatibility. Thought and feeling are perhaps separate ends of a continuum, or even two separate points on an infinite line, or parts of a circle. We now believe they are intricately woven together: land can not exist without sea, as heaven without earth, or good without evil. Thought and feeling are different parts of **the same thing**.

In Chinese philosophy the Yin-Yang relationship is that of tension between the great and the small, light and dark, male and female, between thought and feeling. The world comes out of this tension, from this push and pull. Yang is the masculine, the strong, it is the mind and thinking. Yin is the feminine, the soft, the body and feeling. The following is a list of what I believe to be some of the lines along which we divide up the world.

Good	Bad
Thought	Feeling
Sun	Moon
Light	Dark
Mind	Body
High	Low
Man	Woman
Heaven/Sky	Earth
Rational	Nonrational
Culture	Nature
Self	Other
Fact	Fiction/Myth
Objective	Subjective
Primary	Secondary

In the first column we find what is favoured. Remember that I said earlier, it is not which one we use, but which we **prefer**, for "[t]he truth, when it comes in words, is always a matter of interpretation".<sup>2</sup> Each judgement is based on the past, but still not necessarily dependent on it. We make thousands of decisions every day, and I believe that we tend to rely on the first column. We have been taught that it is more valid, more real, more **true**.

There are many ways to talk about the separation: Heidegger divides thought and feeling into creative thought and mechanical thought. A computer carries out purely mechanical thought. People, when they are acting instinctively are being mechanical, no change to actions, no innovation: using pre-tested patterns and rote learning. Creative thought takes time, like the farmer waiting for her wheat to come up, one can plant the seed, but that is all: one then waits. Creative thought has no pre-set pattern, it does not follow what has been done before: it discovers new ways of looking at issues, and fresh ways of acting. Science leans towards mechanical thought; art towards originitive.<sup>3</sup> It should be noted that we can not use one without the other. They are inseparably linked. At the one extreme we would be machines, at the other completely random. All thought,<sup>4</sup> and life with it, is a balance between the two - a creative tension.

In Eden language leans towards the mechanical. Language is serious and deliberate. It plods along like the tortoise: moving slowly, never doubling back, going in a straight line towards some distant point. In Post-Darwinia language is originitive, playful, emotive. Ideas jump from place to place, thoughts constantly being brought together in new ways. Yet, in each there is the other. Post-Darwinia has reason allowing an accumulation of knowledge and Eden has creativity allowing new formulations and new ideas.

### Our Greek Roots

The preference for reason, and the other things in the column on the left runs deep and long in Western society - as deep as the rifts in the ocean floor, and equally as hidden. This tendency can be traced back to the Greeks, to Plato's debates between Socrates and the Sophists. The Sophists argued that 'man is the measure of all things' and Socrates argued for objective Truth found with reason.

According to Lanham, Western rhetorical styles have followed Aristotle's lead, and are an example of language as it would be found in his Eden. Aristotle was Plato's student, Plato Socrates's. The Greek hero is Plato's model for the individual. The myth of the individual came into being at the time of the city-state created from Greek urban culture. According to Dolores LaChapelle this was possible because of the Greek language. Greek was the first written language to evolve separately from the oral tradition.<sup>5</sup> Reading and writing separate from speech, allowed the language to create a reality (and eventually an authority) apart from the world of one's senses. With the combination of the myth of the individual and the separation of beliefs from lived experience, reinforced through reading and writing, it seems, looking back, almost natural that the Greeks came to champion reason.

The body was no longer necessary for our understanding of the world. Socrates believed that "conscious choice was a pre-requisite of the ethical way of life".<sup>6</sup> The route to truth, then, is through the use of mechanical, instrumental rationality. The same can be said for the individual. Central to Plato's philosophy is the idea of objective Truth - that there is a Truth out there that we can understand through reason.<sup>7</sup> This is the root of the separation, and Plato attacked poetry, which lies in the domain of the body. In the **Republic**, he states: "poetry...we then dismissed from our republic...for reason obliged us." And he believed that poetry was like "a crippling of the mind".<sup>8</sup>

Whether the Greek individual using mechanical thought and believing in objective reason was sufficient to result in renaissance positivism or not, Christianity also played a central role in

shaping later beliefs towards rationality and Truth. According to Horkheimer the Christian belief of the soul as the inner light, the dwelling place of God, made the belief in objective Truth possible. Michael Foucault tells us that the church's confessionals strengthened the belief that what was the most personal could be expressed - Truth can be objective for we are capable of expressing what is most subjective.

Horkheimer explains that "Christianism created the principle of individuality through its doctrine of the immortal soul".<sup>9</sup> The soul becomes more important than the body, a reversal from all that had come before; what is not experienced emotionally has become more important than what is experienced. This, along with the Christian belief of mastering one's natural drives, deepened the rift between thought and feeling.

For Foucault the churches' confessionals led us to believe that we can put into words our most inner feelings. He says we have become 'confessing animals' and "The obligation to confess is so deeply ingrained in us...it seems to us that truth, lodged in our most secret nature, "demands" only to surface".<sup>10</sup> This belief strengthens the Socratic individual - truth is inside the individual, it can be known, and it can, therefore, be expressed. Because this inner truth can be expressed it can also become objective: it can be made public, rational, logical.

So we see that the scales are weighted heavily on the side of thought. The Greek language, combined with the Plato's individual and equating conscious choice with being ethical, were foundations upon which Christianity built, foundation already separate from daily lived experience. Christianity added the belief of the eternal soul and the notion that truth deep within can be expressed. Further, Christianity has a tendency to discourage the desires of the body. Along these lines the characteristics of our individuality emerge - an individuality which we carry into intellectual life.

### Shouting From Mountaintop to Mountaintop

As others, I believe that language is our mode of being in the world (Gadamer). Language is the valleys in which we meet. Language is the shouting across the rush of a waterfall which lies between us. Language tries vainly to equate thought and feeling. In those valleys we may walk together for a time, and point to the peaks all around. But, then we go back to our mountains and like Zarathustra we plan and we think and we prepare to come back down. More than anything else though, from those perches up high we scream, back and forth, back and forth, goes our bantering - like monkeys in the trees. With words we try and fill that endless gap. More than anything else, in this age of dualities, we fight with ourselves, we fight to find the 'right' words. We fight to express our emotions in a world that wants to hear about thoughts.

Writing is central to modern society and looking at the guiding principles for non-fiction composition tells us a great deal about the way in which we attempt to be-in-the-world. Lanham criticizes what he calls "The Books". The Books are based on the Greek individual, Socratic rationality and Plato's distrust of poetry. They assume, as does the confessional, that we can express our innermost feelings. They highlight the idea being presented while not mentioning the importance of style. For The Books language has no feel, no presence - it is only a means to an end, not an end in itself as it is for the residents of Post-Darwinia. In Eden using language has no pleasure, language is merely a tool whose aim is to allow us to communicate. The

Books assume that the Truth can be told, and writing must not get in the way. Ezra Pound, an early twentieth century poet, argued for:<sup>11</sup>

1. Direct treatment of the 'thing' whether subjective or objective.
2. To use absolutely no word that does not contribute to the presentation.<sup>12</sup>

Other writers have followed his example, the famous **Elements of Style** by Strunk and White states:

Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts.<sup>13</sup>

Lanham calls this style C-B-S, Clarity, Brevity and Simplicity. His problem with it is that it does not recognize that language has many other purposes. Language is a delicate balancing act, always a social statement. 'What' is said is as much the message as 'How' it is said; the ideas are as important as the feel. In The Books language is only serious, only goal oriented.

### Talking About Feelings: Common Denominators

Talking about feelings, in a scientific way, is like trying to explain a zen koan:

What is the sound  
of one hand clapping?

It simply can not be done. The explanation is intuitive, creative. This type of understanding is one's own and is experientially based. The best that language can do, I believe, is to point. To say, as it were, "go look in those mountains, see, the ones over there." But it can not take one by the hand and bring you there. Scientific writing works slowly because it works in small, deliberate, thoughtful steps. Creative, intuitive writing - writing based on feeling, and on the body can take leaps. It can do what one feels, and there need not be only logical, rational explanation.

In our society, which is concerned with communication as an end, rationality is valued as a public tool. Horkheimer reminds us that for psychological reasons all humans need some type of 'objective' belief system. At one time this was myth and religion - with the rise of positivism it became the belief in objective Truth found through science. Reason for us becomes an instrument and a tool of the social process: "its operational value, its role in the domination of men and nature, has been made its sole criterion".<sup>14</sup> Concepts, which at one time had their own individual flavour, which we knew through experience, now become reduced to necessary parts: "concepts have become 'streamlined,' rationalized, labour-saving devices".<sup>15</sup> Thinking itself becomes an industrial process, and we are the processors. Knowledge is something that is shared in society, the individual is not part of it. The very thought of knowledge becomes increasingly 'rational'. But, as Horkheimer says, we still bring a great deal of myth and religion into this scientific, positivistic world. Why, for instance, is good 'better' than evil? Life better than death, high over low: these are all remnants of myth and religion - there is no great rationality to them.

As Socrates said "conscious choice is a prerequisite of the ethical way of life". Conscious choice not only works - it is ethical - and it is unethical to rely on anything else. Positivistic attitudes, no longer consciously recognized are unconsciously re-enforced. Even though few believe in objective Truth, our writing style still asserts that we believe there is Truth.

### Style

Old habits are hard to break and there is a certain allure to styles of writing that show authority. In general, 'knowledgeable,' 'learned,' non-fiction writing uses the third person, the passive voice, long strings of prepositional phrases and has virtually no rhyme, rhythm, symbols or metaphors. This writing has become the writing of thought. The writing of feeling, on the other hand (what one finds in any type of literature), is written mostly with those devices that are discouraged in non-fiction.

Mircea Eliade, writing in the 1950's, uses a rhetorical strategy, still common, which uses the third person. He writes 'the writer' and 'the reader' instead of 'I' and 'you.' In doing this he says 'there is no I - this is how things are, independent of my or your personal opinion.' But the message is not explicit, it is hidden in the style. A reader would not accept this assertion if made explicitly, but we accept it in the style. For we are not style conscious, our attention is focused on what is **written**.

The passive voice also deceives us. It indicates that the subject has received the action, while the active voice tells us that the subject has performed an action.

Active voice: George **cut** down the tree.  
Passive voice: The tree **was cut** down.

In the active voice there is an actor, in the passive a 'fact' is stated with no actor. By using verbs in the passive form the world becomes a place of inaction. Similarly, linking verbs have no receiver of the action, some of the most common ones are: appear, be, become, feel, keep, look, remain, seem and stay. These words make writing sleepy, they are the language of diplomacy for they are safe. In sentences that use these verbs we are given the impression that nothing is happening. An example:

The necessity of ensuring that utilization of an ecosystem or species **is sustainable** varies with a society's dependence on the resource in question.<sup>16</sup>

Alternatively, the use of transitive verbs show action. When we change passive to active voice the sentence could go something like this:

If a society needs a resource, it **will protect** the ecosystem or species.

We see that using the active voice indicates action and puts the decision under our control. Using the passive voice the world just is - it is stable and constant. Using the active voice and transitive verbs the world becomes a place of action and we become actors instead of observers. Subjects instead of objects. It can also, as in this case, shorten the distance between the subject and predicate, thereby making connections more obvious.

Non-fiction also uses many prepositional phrases all dependent on one another. From the above sentence: **of** ensuring, **of** an

ecosystem, **with** a society's, **on** the resources, **in** question. This means that the reader must make logical links between words and phrases, the feel of ideas is lost; the relationships are too clean, too precise. There is little space to be creative, to allow one's imaginations to work. Non-fiction writing also discourages the use of metaphor, rhyme and rhythm. In doing this it downplays the importance of emotion or - you could say - it elevates the emotion of emotionlessness, coldness, and the unfeelingness of instrumental rationality.

**Silent Spring** came out in 1962 at a time when people believed that DDT could increase our food output. The book spent thirty-one weeks on the **New York Times** bestseller list and sold half a million copies in hardcover before being brought out in paperback. It was a detailed study of the effects of DDT on the biotic community. From the start the book was criticized for its emotional content. It was called 'bad science' because science should have no emotion - it should be objective.

The title of **Silent Spring's** first chapter is "A Fable for Tomorrow". The first line reads "There was once a town in the heart of America where all life seemed to live in harmony with its surroundings". There is little doubt that the message Carson was trying to convey could not have been written as effectively without allegory, metaphors, rhyme, rhythm and many transitive verbs. Long lists of prepositional phrases would put the average reader to sleep. Her use of language is sensitive (even if the subject is not):

As the chemical penetrated the soil the poisoned beetle grubs crawled out on the surface of the ground, where they remained for some time before they died, attractive to insect-eating birds.<sup>17</sup>

What happens to this sentence when we take out the actor? Perhaps this:

Beetle grubs that had crawled onto the surface, poisoned by chemicals, were attractive to insect eating birds for some time before they died.

We immediately notice that the life of the sentence has been drained. Take away active verbs and you have inaction - no actors, no acted upon, nothing moves. The impact of Carson's book would have been quite different if written in a different style. The information she wanted to say could not, I believe, be conveyed in the traditional form. What really surprises me is that this style has remained in the realm of literature, the fringe of non-fiction and almost completely outside of academic writing.

I am not arguing for exclusive use of the active voice and transitive verbs. It is sometimes necessary to talk in a more passive, and less forceful, way.

Feeling in writing is conveyed in many ways. Images are one of the most important devices that writers use to express emotion. Images involve the reader's own experience; flat scenes take on three dimensional life. The subject becomes real.

Some lands are flat and grass-covered, and smile so evenly up at the sun that they seem forever youthful, untouched by man or time. Some are torn, ravaged and convulsed like features of profane old age. Rocks are wrenched up and exposed to view; black pits receive the sun but give back no light.<sup>18</sup>

These images allow us visually to engage in understanding. Images can not be divorced from a freshness that ideas do not possess. We feel for what we see, smell and hear, images bring us closer to the world, they allow us to be a part of it. Images are strengthened when used metaphorically:

Your absence has gone through me like a thread through a needle. Everything I do is stitched with its colour.

Rhyme, rhythm, repetition, symbols, these techniques of literature are important ways in which writers bring feeling into their language. Yet these techniques have little esteem in non-fiction writing even though they are crucial in order to bring feeling into writing.

### Simply Speaking

The point is that almost all non-fiction writing has emotion: the feel of someone who does not care. Someone telling us how things are - not how things should be. There is, at least on the surface of non-fiction writing, no politics. This style of writing discourages information that compels action and encourages passivity and disconnectedness. Emotive language needs action, people to act, the opportunity to play with words, and connections between thought and feeling.

Lanham argues that clarity is a combination of content of a work and its stylistic surface "'clarity' [is] only one point on a spectrum".<sup>19</sup> To be clear in the larger sense of the word one must 'oscillate' between the stylistic surface of a work and the deeper meaning. Style consciousness allows the reader to better understand the message being expressed, and it allows the writer to be more expressive. Balance between the Yin and Yang forces brings forth the creative tension necessary for a more complete understanding.

In the early days newspapers were published by a particular political party. So, when a person bought a paper, they knew who's point of view it represented. Now newspapers are supposed to be 'objective.' This is the same case with non-fiction writing, because we as individuals in the world hide behind our writing style, we offer a false picture of what exists. We put forth our opinions from under a cloak which has no colour. The surface of diverse and diverging messages look surprisingly similar.

This does not mean that all our writing should be symbolic and metaphoric, as in fiction, or should sound like a poem with its rhyme, rhythm and repetitions, or should only use transitive verbs and few prepositional phrases. But, it is important to recognize that at the best of times communication is fraught with difficulties - metaphors, symbols, rhyme, rhythm and transitive verbs can help. And finally we notice that Truth comes in many guises - no one of them superior. Our use of reason may be like the people sitting beside the fire who want to get to know the night. With torches ablaze, they turn to the forest only to find that the night is nowhere to be seen. Back at the fire they sit puzzled.

I am a white eagle.

### Notes

1. Within this I include academic writing and technical writing but not literary non-fiction.
2. Tom Brown Jr., **The Tracker**, (New York: Berkely, 1979), p. 19.

3. What Heidegger calls mechanical thought Max Horkheimer would call instrumental rationality. I consider reason, rationality, mechanical thought and instrumental rationality to be similar.
4. At this point I am equating thought with feeling, but what is important is that these types of 'thought' are extremely different, they are different ways of being in the world. Heidegger does not mean to degrade feeling, he only recasts it as a part of the thinking process. For him 'thinking' and 'feeling' are parts of the same thing, and they cannot be separated.
5. Dolores LaChapelle, **Sacred Land Sacred Sex Rupture of the Deep: Concerning Deep Ecology and Celebrating Life** (Silverton: Finn Hill Arts, 1988), p. 24.
6. Max Horkheimer, **The Eclipse of Reason** (1947, New York: Continuum, 1974, p. 134.
7. *Ibid.*, p. 133.
8. LaChapelle, p. 25.9. Horkheimer, p. 137.
10. Michael Foucault, **The History of Sexuality Vol. 1: An Introduction**, (1978, New York: Vintage, 1990), p. 60.
11. Rules, like laws, are only pointers and they do not determine outcome: these rules can be followed and the writer can still be quite sensitive to style. However, the point is that for most who follow them style becomes unimportant.
12. Gary Geddes, **20th Century Poetry & Poetics**, (Toronto: Oxford U P, 1973), p. 549.
13. William Strunk Jr. and E.B. White, **The Elements of Style: Third Edition** (New York: Macmillan Publishing Co. Ltd., 1979), p. xiv.
14. Horkheimer, p. 21.
15. *Ibid.*

16. World Conservation Strategy, my underline.
17. Rachel Carson, **Silent Spring** (1962: Boston: Houghton Mifflin Co., 1987), p. 93.
18. Loren Eiseley, **The Immense Journey** (1947, New York: Vintage, 1957), p. 1.
19. Richard Lanham, **Literacy and the Survival of the Humanities** (New Haven: Yale UP, 1974), p. 97.

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## THE VOICE OF THE EARTH: A REVIEW

Allen D. Kanner

Since the appearance of his first book, **The Making of a Counter-Culture**, Theodore Roszak has been a keen and eloquent observer of modern society. Roszak approaches his work not only with the perspective of a historian, which he is by training, but with the passion of a visionary, which he seems to be by nature. His latest book, **The Voice of the Earth**, is a call for the creation of a potentially revolutionary new field - ecopsychology. The goal of ecopsychology is "to bridge our culture's long-standing, historical gulf between the psychological and the ecological, to see the needs of the planet and the person as a continuum."

The cross-fertilization of psychology and ecology would advance both areas in crucial ways. Roszak sees Western psychology, and related fields such as psychiatry and social work, as severely limited by their insistence on conceptualizing the environment strictly in social and cultural terms. As a result, they fail to realize that human sanity at its core includes an harmonious, sustainable, and mutually nurturing relationship with the natural world. Conversely, because the environmental movement lacks a psychological perspective, it has over-utilized scare tactics in its attempt to educate the public about ecological destruction. By now many people react to its message with either numbness or despair.

To fully succeed, environmental activists will need to call forth and nourish the intrinsic affinity with nature that lies dormant in most members of urban-industrial society. Certainly this entails "working through" the pain and anger that arises where people first awaken to this repressed part of themselves. Just as importantly, it means fostering an awareness of the rich and fulfilling, life that comes from living in balance with the natural world. For all this environmentalists need psychologists.

As the first major tenet of ecopsychology, Roszak proposes the existence of an "ecological unconscious," an accessible but largely unconscious part of the mind which contains a vast reservoir of ecological wisdom culled from our evolutionary heritage. Indigenous peoples around the globe are considerably more skilled than we at drawing from this reservoir, typically through myth, ritual, and other spiritual practices. As a result, the natural environment is experienced animistically, that is, as alive and imbued with spirits. Nature is treated with respect, care, and celebration. In contrast, urban-industrial cultures deny or repress the ecological unconscious. Consequently, they focus on exploiting the earth's resources in service of "progress," meaning the accumulation of material goods and development of advanced technology. The Western perspective creates a far less vibrant world. Mountains, lakes, and air all are considered dead. Plants and animals are seen as inferior and delegated to the periphery of human concerns. Nature is treated as a means to an end.

The existence of an ecological unconscious has major implications for much of psychology. It resurrects the Freudian Id from its demeaning position as a driven beast with sociopathic morals, providing a more noble linkage to the rest of the animal realm. At the same time it grounds the Jungian collective unconscious in biological and physical reality, so that myth, archetype, and spirituality are rooted in our bodies and nature. The ecological unconscious provides a similar earthy conceptual service for humanistic and existential psychology, which tend toward the ethereal and pay little attention to the organism in its environment. Roszak does credit Gestalt psychology with providing a theoretical perspective that includes a "more fully biological context" or the development of psychotherapy, although rela-

tively little has been done in practice. And although he does not mention them, evolutionary psychologists have been applying evolutionary principles to understanding the development of the human mind. But, like Freud, they are incapable of addressing the spiritual or mythological side of life without becoming materialistically reductionistic. **The ecological unconscious thus stands at the nexus of biology, ecology, psychology, and spirituality, while according legitimacy to each level of analysis.**

But if indeed there is an ecological unconscious, in urban-industrial society we routinely repress it, with as yet uncharted psychological damage. For example, Roszak notes that the modern city in its present energy-devouring state is only about 100 years old. It is likely that in response to the unprecedented noise, crowds, concrete ugliness, and dearth of non-human life in the typical urban habitat, the best way to cope (besides flight) is to mute our senses and resist the tendency to commune with our surroundings. A similar deadening of response might arise from the bland, semi-isolated character of suburbia, where stimulation is mostly to be found in the mind-numbing presence of TV or the jangling excitement of shopping malls. Yet we have no words in our psychological parlance to describe the deep disturbance people experience when the urge to be in contact with the natural world is repressed, or where we are routinely isolated from the patterns and rhythms of the rest of the Earth.

The idea of an ecologically attuned unconscious is also consistent with a powerful new concept that is gaining increasing notice among ecologists: the Gaia hypothesis. From a Gaian perspective the Earth is a single, living self-regulating system from which human beings have emerged recently as an integral part. Conceiving of the planet as alive and evolving, moreover permits a modern day animism that is able to incorporate the most recent breakthroughs in ecology and systems theory. It is even possible, as Roszak puts it, that "the basic unit of evolutionary survival [is] the biomass as a whole, which may select species for their capacity to enhance the livability of the planet." Residing within the ecological unconscious, therefore, is our direct connection with the Earth, the impulses, feelings, and intuitive knowledge necessary to live in balance with Gaia.

Taking the perspective of Gaia, Roszak wonders if she is aware of the destruction being wrought by her human children. In warning and hope, she may be "speaking" to people around the globe by stirring up the ecological unconscious, until once again we begin to listen to its wisdom. The result could be a "creative disintegration" of urban-industrial society and the beginning of a new, ecologically sane human presence within Gaia. Ecop-

psychology, in fact, would encourage just such a transformation.

Although much of **The Voice of the Earth** is focused on ecopsychology, the middle chapters have a much more philosophical bent. Roszak presents a sweeping review of the history of Western science and ideas, culminating in the cosmological implications of quantum physics, chaos theory, and current theories about the "history" of time itself. Based on the cutting edge of late 20th century science, he believes the most reasonable conclusion to draw is that the universe has a direction or purpose. According to this "Anthropic Principle," since the first moments of the "Big Bang" the cosmos has been evolving toward ever more complex, self-regulating systems. Most recently, these include life and self-aware beings, such as ourselves.

In support of the Anthropic Principle, Roszak cites recent calculations showing that life could not have arisen by chance alone in the roughly 15 billion years of the universe's existence. There simply has not been enough time, nor anywhere close to enough. A guiding principle of **some sort** has been at work. Moreover, in its most ambitious form the Anthropic Principle states that the universe has been evolving towards the precise and extraordinary conditions necessary for the emergence of self-reflexive beings.

Many of us become quite uncomfortable with the narcissistic implications of a cosmology in which human beings are special. If I understand Roszak correctly, however, he is not claiming that we have any more intrinsic worth than, say, a snail or a star. But we do represent a unique and quite recent development in the evolution of the universe (along with any other self-aware beings that exist). This leaves us with much to be thankful for - much to tragically waste.

Rozzak presents for our consideration an astounding progression: The Anthropic Principle (or guided unfolding of the universe) expressing itself through a planetary life form, Gaia, who in turn is deeply embedded in the human mind as the ecological unconscious. The possibilities are dizzying. Yet this compelling vision, drawing on history, science and psychology in a manner rarely seen today, is exactly what is needed if psychologists and ecologists are to collaborate effectively in the creative disintegration of urban-industrial society. Indeed, were Gaia calling us to such an endeavor one way she would speak is through **The Voice of the Earth**.

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## THE ENVIRONMENT AND THE ALTERNATIVE PRESS

Joan Gaunt

There is nothing new in writing about the environment. This is something which has been going on for millennia -- or at least as long as writing has existed. Pythagoras, for instance, had a thing about beans, and the laws of Hammurabi were concerned with problems of pollution. The early philosophers linked their ideas with the natural world and the Bible, like all the great

religious works, begins with its own version of the creation of ecosystems.

The theme continues down the centuries, always developing and discussing a deep connection between humans and Nature. A typical instance is the dying speech of Bussy D'Ambois (Chapman, 1641) which, utterly repellent though it is, keeps faith



with the ecosystem approach.<sup>1</sup> This approach is apparent right up to the advent of the industrial revolution. In hindsight we now recognize that an inevitable side effect of that revolution, was the emergence of a driving need to control and process the environment, to fit it into the paradigm of profitable/useless/nuisance. Since one of the primary ways of establishing control over anything, other humans, animals, money even, is to envelop the whole issue in a veil of mysticism which can only be pierced by a few "chosen" or "elect" individuals. This need took environmental comment out of the "real" world and into the purlicious of romantic poets.

The romantic poets were considered thoroughly alternative because they wore soft collars and jackets with belts, smoked opium and discussed radical politics -- when they weren't writing about Nature. But few of them, I suspect, would have understood the term "environment" in the same way that we do. With the possible exception of John Masefield, who comes late into the genre anyway, "Nature" for them was all purity and prettiness. Their human characters, if not nymphs and shepherds gambolling, deceiving, fornicating in a perfect landscape, move on the surface of the Earth without really coming into contact with it. Dreadful things happen to them -- rape, murder, the loss of children, family and friends, but these events take place in a denatured vacuum. With very few exceptions -- Jean Ingelow's drowned Elizabeth perhaps (c. 1860) -- the "natural environment" has nothing to do with their ordinary lives. No human eco-madness ever disturbs the serene gentleness of the poets "alternate" world. Alternative to what? Perhaps to the tough brutalism of early industrialisation. They fled the harsh cruelties of a world which they felt unable to change. Poor sickly Keats, accident prone Shelley and his idol, the snobbish Byron, talked a lot but never really tried to come to grips with the political, economic, social and most importantly, the physical realities of poverty.

Ironically, the 19th century produced some of the very same industrial techniques which helped to pose such a threat to the Earth; the paper, inks, machinery, which made it so much easier to write about the problem. 19th Century prose writers took full advantage of these factors but, while unquestionably more physical than their poetic contemporaries, concentrated on interactions between people. The industrializing process and the prospect of economic development became more important than the effect of that development on the physical environment. Whatever their place on the socio-economic continuum, dominated as it was by the fallacy of "growth", they visualized that line as one joining or separating people from people rather than people from their environment. Marx and Engels protested the social and economic destruction of humanity, but it is difficult to find much concern for the land which was being built over, the polluted rivers and canals, the smoky air. Chimney smoke was a poison which killed and maimed people, there is no evidence of concern for any possible effect on animals and plants or, long term, on the atmosphere. There is an implication of environmental pollution as a kind of political weapon used to destroy "the poor" -- although in practice, its effect on the rich was equally, though perhaps less obviously, devastating. By clothing the natural environment in a veil of mysticism behind which the "poor" might shelter and by ignoring the problems of the wealthy who persisted in living in the cities, environmental degradation might be ignored. As Bertrand Russell points out, for the 18th and 19th century writer, the basis of romanticism

was the notion that the poor were always "rural, never urban or industrial" (Russell, 1946, p. 652). Their pictured environment was as artificial as a Victorian posy and never truly related to the realities of environmental degradation.

The pendulum of literary fashion began to swing as the 19th century turned, but the first world war drew thoughts away from the environment. That people were aware of the existence of ecosystems shows up in the poems and prose devoted to the concept of poppies growing in the blood of slain soldiers. Unfortunately, the idea is still romantic rather than practical and does not appear to have persuaded anyone to stop making war.

In much contemporary media it is true that important matters like sport and finance and sudden, preferably bloody, death, continue to occupy most of the acres of print which are published daily, but there is also a plethora of written material on environmental and ecological matters even though it is probably less than might, at first, appear (Dyer & Dyer, 1989). One of the most emphasized points is that the environment is in crisis; the question asked -- what can be done about it? Before examining what, if any, answers are given to this question we will look briefly at the nature of the written media. I would subdivide this material into three main groups: 1) Newspapers, 2) Magazines, 3) Books. The grouping is not arbitrary but follows the basic divisions of information into short, medium and long term retention areas. Communications research has shown that the phrase "a nine days wonder" is not just a pithy mot. There are indeed, one day events, nine day events and long term topics which can be tackled in depth and each section of the written media has its own area of interest.

**Newspapers:** dailies, morning, and afternoon, deal in the short span end of human attention and this shows in their treatment of environmental matters. They cover the noisier protests, often in search of blood. Like TV, the shortest, short span of all, they are not interested in consensus or consultation. This is hardly surprising since it is hard to get excited while watching people think. Confrontation and controversy is what sells daily papers, though your local weekly may take a more "in depth" view. Newspapers concentrate on protest -- select a villain, the "Council", ETSA (Electricity Trust of South Australia), the Highways Dept, and a hero or heroine to focus their story -- but if the participants show signs of looking for peaceful solutions or mutual agreement, then the daily press, disappointed, goes away.

**Books** - mountains of them. Until twenty years ago, getting a book published on "the environment", was next to impossible. Such works as did see the light of public scrutiny, were invariably either text books and often too specialized to cover more than a tiny part of the ecosystem, or gimmicky. Not because the writers wanted to appear gimmicky, but it was that or nothing. There is a lovely legacy of those early days in the wonderful titles. Wilsher and Richter **The Exploding Cities**, Schumacher's **Small is Beautiful**, Ward and Dubos -- **Only one Earth: The Care and Maintenance of a Small Planet**, Ward's masterpiece, **Spaceship Earth** and of course, Rachel Carson's beautifully simple and evocative **Silent Spring**. And, on the political fringe of ecosystems concern, Susan George on **How the Other Half Dies**. All beautiful stuff, but it is doubtful whether any of these people would take kindly to being called "alternative". Today's writers probably wouldn't mind at all, although their titles lack pizzazz. Bill Devall on **Deep Ecology** and Murray Bookchin on

the **Ecology of Freedom** both write at length in presenting alternatives to present day eco-madness. But this paper is not going to discuss books. The subject opens out into a number matters which would require too much space. My concern is chiefly with the magazine section of the genre which are published in Australia.

Perhaps we should try again to define what we mean by alternative. The reaction of most people is to ask "alternative to what". To the conservative press? Not necessarily, since the alternative press can be stupefyingly conservative in its adherence to outdated ideas. Alternative to the establishment press? A better idea but it carries the possibility of future problems. Simply that if an "alternative" is successful, it is very quickly adopted by the establishment and becomes a trend. If the purpose of an alternative press is only to be "alternative", then it must be constantly seeking to be more outre. While that does happen, most alternatives keep to a track which they have found to be valid for them. This paper assumes that "alternatives" are eco-concerned, though whether all of them are, or if all eco-concerned magazines are alternatives, is a question we will examine later.

Before looking at magazines it might be well to emphasise that one of the most striking things about the "alternative press" is the enormous variety, not only of topic, but of form and layout. While mainstream magazines are often indistinguishable from each other, the alternatives tend to differ completely and are instantly recognizable. This may be because they are often produced by volunteers whose ideals colour the pages of their publications. Many are the "brainchild" of one individual and, although no longer entirely dependent on love and voluntary labour, not only does the concern of the founder for the integrity of his or her production continue to imbue its pages but in most cases it also continues to reflect the personal style of that individual.

Some examples.

**The Trumpeter**, a Canadian publication, has been described by Arne Naess as "the premier journal of deep ecology" and indeed, it is correct to refer to it as a professional journal rather than a magazine, alternative or otherwise. Consisting, for the most part, of erudite papers written by academics and others, and dealing with the philosophical questions surrounding environmental issues, it is by no means "dry" or difficult and there is no lack of passion. The inclusion of excellent poetry helps to ensure that this is so. Edited by Alan Drengson of the University of Victoria in British Columbia, **The Trumpeter** maintains a standard for other magazines to aspire to.

**Raise the Stakes** is an entirely different type of publication. "House magazine" of Planet Drum Foundation the bioregional movement, -- its editors refer to it as a "review"; it appears only twice a year although with regular supplements. Edited by Peter Berg and Judy Goldhaft with an team of hard working helpers, it emanates from a rambling old house in San Francisco and is funded by lecture tours, donations, memberships. Here too, the cheerful enthusiasm of the editors comes across to emphasise the positive approach.

**Green Web** is a different matter again. Not even a "magazine" in the physical sense, **Green Web** comes out in a bundle of foolscap sheets almost entirely from the pen of environmental activist David Orton, another Canadian -- although David's background is English working class -- and Helga Hoffman.

Determined advocates for the integrity of the Earth and in particular for the wilderness areas of Nova Scotia, David and Helga turn out an incredible amount of literature - all of which is informed with passion.

**The Deep Ecologist** is the newsletter of the deep ecology movement. Like almost all alternative periodicals, it relies on subscriptions and exists on a shoestring. The brain child of gentle, caring, Victorian schoolmaster John Martin, it has more recently been in the hands of the present writer and has developed a much more acerbic, politically aligned style. Patched together from bits and pieces of other magazines, **The Deep Ecologist** aims to network the views of deep ecologists, to keep readers in touch with each other and with what is being said and done in the name of the ecosystem.

Environmentally, **magazines** come in two different sorts. A positive eco-concern and the "we can't just ignore it" attitude. The latter category includes things like the motoring magazines, which are handily placed to emphasize the great outdoors<sup>1</sup>. The roaring gas guzzlers have changed (so they tell us) into sleek and silent means of getting out to look at Nature, while conserving lots of petrol. **The Farmer and Stock Breeder**<sup>2</sup>, not a publication which has previously found friends in the environment business, has always run articles on how to conserve land and prevent erosion. Hitherto these have taken second place to pieces on how to squash more chickens into a cage and the exciting prospect of super cows, pigs, sheep, etc. The emphasis is still on conservation as a necessary factor in the long term business of making a living rather than any suggestion of an objective morality, but they are slowly getting there. This, I believe is a tendency which should be encouraged. Since as I will show, the alternative press reaches a specialized -- alternative if you wish -- readership, the mainstream press has a responsibility to bring eco-concerns to the attention of mainstream readers.

Some magazines of course, will never make it. Huntin', shootin' and fishin' and the destruction of other animals for the fun of it is not ecologically sound by any criteria. The next to last bastions of anti greenism, most of them have given up claiming that animals actually enjoy being hunted to death, but they seldom rise to more than a whining plea that it is necessary to teach children to kill enemies.<sup>3</sup> And then there's the way out version of the same breed which suggests, while trying desperately to stay just this side of the law, that killing people is even more fun than killing other animals (Clede, 1989).

The free mailing list for **The Deep Ecologist** contains 37 titles. We probably receive many more than that, since often they are short lived, dying out after no more than one or two editions. So how can we classify all this print and how much of it is significant?

In our office we file magazines into a series of cardboard boxes and stick labels on them. We have "Esoterica", "Practical", "Philosophical", "Overseas", "Political", "Activist", and "Unclassified" -- which perhaps ought to read "unclassifiable"! Of course they overlap, especially the unclassifieds, but we have found that these boxes do at least tell us where to start looking!

The alternative press has its aristocrats. A glossy elite of which is probably **Simply Living**<sup>4</sup>. At \$5.50 a copy (1989), its 120 shiny pages are definitely coffee table material. Superb illustrations and internationally famous contributors turn editors of more modest journals green with envy. But **Simply Living**, remains true to its genre. Its writers are famous for their contributions to the cause of an ethical ecology. Its editorials push for

environmental awareness. In the copy to which I turned in writing this paper (Vol. 3, No. 7) -- the Editorial was headed "How you can help heal the Earth," and this is typical.

Right over at the other end of the "presentation" scale from **Simply Living**, is the Queensland based, **Down to Earth**.<sup>6</sup> Photocopied onto sheets of A4 and folded in half, it is mostly made up of bits clipped out of other magazines, but does contain original thoughts from the team of young people who put it together. Their typing leaves much to be desired and we're never quite sure if the bits that come out upside down are supposed to be like that. However, it remains deeply committed to the cause of Earth protection. Directed straight at the heart and intelligence of the reader, without frills or gloss, the importance of **Down to Earth** is that it is totally genuine and lacks the invisible shield of hype which often relegates the reader, in whatever genre, to a peripheral status. **Down to Earth** is a letter from a friend to a friend on matters which concern them both. Like **Simply Living**, it goes into the unclassifieds; both are so wide ranging that no one theme is evident.

Apart from the price there is another difference between the two which runs through all of the magazines. **Simply Living** is very much a practical based publication with an environmental bias. **Down to Earth** is much more "New Age" in concept.

The term "New Age" is a leftover from the "Age of Aquarius," that exciting post hippie era when it seemed that something different was really going to happen. The Age of Aquarius brought with it an emphasis on the spiritual and a reaction to the intensely practical reductionism of earlier years. Flower Power, Love, white magic and alternative healing were the watchwords. The most recent crop of "new agers" are turning back to politics, realizing that the use and misuse of people and their environment for political and economic purposes won't go away. But in this strictly pragmatic, newest of ages, the "New Age" of a generation ago hangs on. Healing, worshipping, flower loving, and the old religion rides again -- though not on broomsticks -- while a new religion in the form of Gaia worship is gaining strength.

Our "esoterica" box is always full and includes "spiritual", except where spiritual more properly belongs with philosophical. If that is confusing, it is inevitably so. **Casurina** (sic)<sup>7</sup>, for instance, includes the ubiquitous admonitions to plant trees, but is mainly concerned with a spiritual approach to living. There are a great many Red Indian references and "healing" has a tremendous importance. An advertisement for a "Dolphin Connections Workshop" includes "Talk on Creation mythology," "Dolphin connections with Sirius and Isis" and "Sacred Circle Dance to the Oceans". It has the same sort of peripheral connections with reality as Bussy D'Ambois and his bloody end. It shares these connections with all the esoterica; **Earth Spirit Quarterly**,<sup>8</sup> **Kindred Spirits**,<sup>9</sup> **Fountain Group**,<sup>10</sup> rely heavily on meditation and mysticism and physical connections with the Earth. **Kindred Spirits** is a pagan magazine and a remarkably sensible publication. Intelligently written, it stands head and shoulders above the press of tacky and second rate junk which circulates in this particular section of the alternate press. It is, therefore, always something of a shock to come across -- juxtaposed to a political piece on woodchipping -- a report of a "family magazine" for pagans with the "usual range of subjects like Magic Wicca Herb Lore."

A useful way of defining the difference between the spiritism which divides New Age from practical initiatives, is to compare a magazine like the Newsletter of the Allergy Association **Aller-**

**Gen**<sup>11</sup>, with the **Fruitarian Network News**<sup>12</sup>, both of which are essentially health orientated. **Aller-gen** is designed to help people who have a real problem with allergies. Its advertising is confined to healthy foods and dust mite sprays and its editorial comes straight from the heart of a sufferer. **Fruitarian Network News** is prepared by a group which believes that humans should eat nothing but fruit. It ignores the indisputable fact that this would place humanity in the position of being the only complex animal (with the exception perhaps of the Koala and Panda both, significantly, in danger of extinction) which confines its food to only one form and, in this case, one which omits many of the basic nutritional elements needed by mammals. But the real give away is not in the far out nutritional advice but in the use of words. New Age jargon goes in for a lot of "joy", "fun filled", "healthy", and "peaceful" applying this language to everything from religion to sport, and the **Fruitarian** is full of it. **Aller-gen** runs an article on the controversy of amalgam in teeth and, while obviously sympathetic to the idea that amalgam may cause problems, does not edit out that part of the article which says there is no proof that it does. Fruitarianism not only accepts health problems, but even puts them forward as proof of good health. Hunger, cessation of menstrual periods, stunted growth -- the sort of conditions which result from anorexia and the chronic malnutrition endemic to third world countries, are joyfully lauded as a happy result.

Of course, "New Age" is not to be recognized solely, or even principally, by a partiality for excess. On the contrary, many "New Age" publications do have strong, sensible ideas. **Unicorn**<sup>13</sup> juxtaposes Don Bradman with "New Age Fathering," asks Ita Buttrose for an opinion on the state of the world and runs a superb article on the problems of indiscriminate logging in the Malaysian rain forest, right next to a careful description, council applications and all, on how to build a bush house. What does give it away is its advertising. New Age advertising is almost 100% esoterica: Tarot, flower essences and the ubiquitous crystals, polarity training and the "Macrobiotic Way of Zen Shiatsu." How to tune up your brain and tune into reincarnation. Esoterica always seems to have plenty of cash with which to buy advertising space.

Another substantial group of magazines which take a practical approach, deal with permaculture, soil conservation, and seed saving. **International Permaculture**<sup>14</sup> is probably the most professional of these but in practice, all seem to strive to be, literally, down to earth, sensing that fairness is inefficient, and efficiency is desperately needed. Hardly any esoterica gets into their pages and this means that not too much advertising of any kind appears there. This is unfortunate, for, without it, things could get financially difficult, and this section of the magazine trade is doing some splendid practical work for a sustainable future.

Prominent among the alternative genre are the specialists. Save the trees/whales/rainforest/coastline/mountains/the world. Down with nuclear arms/multinationals/Macdonalds/Nescafe and Kraft. Every species and each bioregion has its own defenders. Every manufacturing company features on somebody's hit list. It's here where the real activists are to be found. From **Earth First!**<sup>15</sup> -- a paper which many people feel differs very little in tone from the top down bullying of its sworn enemies -- the loggers and wolf shooters, to the fervent activism of the Rainforest Action Group. Sitters up in trees argue with tree spikers on which is the best line to take. Well meaning writers

can confuse civil disobedience with vandalism. Curiously, this group goes in for its own special tabloid format. Newsprint rather than gloss mirrors the slash and grab tactics. If newspapers are designed to cover the one day wonder event, so the activists appear to be saying that everything is a one day event forever.

The tabloid form is particularly popular in N. America which produces some excellent papers. **Earth First!** is a tabloid as is **Fifth Estate**.<sup>16</sup> Since they look much alike, its easy to confuse the two. The difference is that **Earth First!** issues from an essentially misanthropic, "protect the earth" posture which assumes that human beings are not a valid element in nature but some sort of aberration. Needless to say, the provenance of the aberration is never discussed. **Fifth Estate** on the other hand is basically a political broadsheet. Wherever politics and environmentalism interface, and they do it all the time since politicians discovered it to be a voteworthy topic, the approach varies according to which comes first. Because **Fifth Estate** is an anarchist paper, it naturally blames "The State" for allowing private industry to log forests. **Earth First!** directs its most fervent anger to private industry operating through its arch enemy, modern humankind. The end result, expressed as a desire to beat somebody up is much the same.

### Conclusion

In this paper I have raised a number of questions. What is an "alternative" medium? Is the "alternative" press always environmentally aware? Does a concern for the ecosystem necessarily qualify a magazine as "alternate?" Certainly we receive magazines which do not fit into any recognizable paradigm of "alternative," unless we always interpret "alternative" as "eco-concerned" and vice versa. Publications like the newsletter of the **Australian Soil and Water Conservation Ass**<sup>17</sup> are, without question, devoted to matters of eco-concern, but share none of the other factors which we might suppose, distinguish the alternate from mainstream press. Some alternative magazines, equally plainly, have taken up eco-concern because by doing so, they believe, they stress their differences from the "mainstream". The English Anarchist magazine **Greenline** undoubtedly sees itself as an alternative to the political establishment, and its title is clearly intended to align it with "green" or conservation issues. In practise however, it has nothing useful or constructive to say on ecology or matters to do with the environment. The only thing "green" about it is in its title and the rather lurid green ink in which its cover is printed. It will be interesting to note, if the mainstream press continues to express concern for the environment, whether any of the "alternative" publications will move away from environmental issues.

And how do you recognize "alternatives"? Why is **Simply Living** -- for all its coffee table gloss -- an alternate magazine, while the almost equally glossy, equally eco-concerned **Australian Soil Association** quite obviously is not. I don't know the answer, but I suspect that it has to do with the professional/amateur interface. **Soil Association** is a production for professionals, contributed to by professionals. Its producers appear to believe that conservation should be the work of professionals. **They place a barrier around soil and water problems** and say, in effect "don't you worry about that, we will take care of it". I believe that this is reinforcing the separation of the general population from the concept of environmental protection while allowing it to continue to believe that it is "not our problem". **Simply Living**, is produced by professionals for

amateurs -- in the best sense of that word. It begins with the assumption of bio-eclecticism on the part of its readers and, consequently, places responsibility for environmental protection on them. **Soil Association** makes the statement, "this is what we are doing for you" while **Simply Living** says -- this is what you could be doing for the ecosystem. This, I believe is a genuine alternative to what has been for too long an easy "cop out" for humanity. Perhaps "alternativism", is not so much an alternative to mainstream, but simply a willingness to accept that "alternatives" not only exist but that it is up to humanity to put them in place.

The question which must arise is whether in practise all this environmental matter in the alternative press is really useful if it is only reaching those people who are environmentally concerned anyway. Would it not be more useful to concentrate on getting these items into the mainstream press? The answer to this question would certainly be yes, were it true that concern for the environment is the same thing as knowing what to do about it. Since this is not the case and much alternative writing is soundly based on practical knowledge, plainly it is useful to spread the word as far as possible.

It may also be that its usefulness lies in being an alternative -- it reaches an audience which would otherwise not be listening -- especially if it believes it already knows all the answers. But, if this is the case, there arises a further difficulty in that it may not reach mainstream readers! Fortunately for the ecosystem, this apparently insoluble circular problem appears to be breaking down as more and more people are coming to realize that ecosystem damage is affecting everyone -- regardless of their reading patterns. At a time when the eco-crisis is real and pressing, the politics of mainstream/alternative surely ought to be irrelevant.

Is it worthwhile? Of course. Every time these things are said -- that trees are vital to life on our planet, that pollution will kill us and everything else in our ecosystem, that stupidity and ignorance will cost us, literally, the Earth, I believe it is truly worth saying.

### Endnote

The dying speech of Bussy D'Ambois. No, I have not made it up -- Chapman did that in (or around) 1641. Gory tragedies were all the rage then -- the bloodier the better. It makes no more sense when read in context but it is definitely of an ecological stamp, is it not?

"My sun is turned to blood in whose red beams  
Pindus and Ossa (hid in drifts of snow, laid on my heart and  
liver) from their veins, Melt like two hungry torrents, eating  
rocks,  
Into the ocean of all human life,  
And make it bitter, only with my blood." (George Chapman,  
1641).

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## Notes

List of Magazines - in order of reference

1. **The Trumpeter**, Victoria, B.C. Canada
2. **Raise the Stakes**, San Francisco, Calif.
3. **Green Web**, Nova Scotia, Canada
4. **Holdens**, Express Pub. North Ryde, NSW.
5. **The Farmer and Stockbreeder**, Sydney, NSW.
6. **The Sporting Shooter**, Sydney.
7. **Guns Australia**, Sydney.
8. **Simply Living**, Torrey Hills, NSW.
9. **Down to Earth**, Spring Hills, Queensland.

10. **Casurina**, Maldon, Victoria.
11. **Earth Spirit Quarterly**, Nimbin, NSW.
12. **Kindred Spirits**, Bega, NSW.
13. **Fountain Group**, Adelaide, SA.
14. **Allergen**, Adelaide, SA.
15. **Fruitarian Network**, NSW.
16. **Unicorn**, Nimbin, NSW.
17. **International Permaculture**, Sydney, NSW.
18. **Earth First**, Tucson, Arizona, USA.
19. **Fifth Estate**, Detroit, USA.
20. **Australian Journal of Soil and Water Conservation**, NSW.

About the Author: **Joan F. Gaunt** is a retired scientist turned journalist with degrees in both science and communications -- the latter majoring in linguistics. She firmly believes in the adage that the pen is mightier than the sword. She is the past editor of **The Deep Ecologist** -- an Australian-based newsletter for deep ecologists and anyone else who cares about the protection of the Earth. She maintains a worldwide correspondence in preference to publication. The present paper is a rare exception. Originally read at the 1989 "Ecopolitics IV" conference in Adelaide, it has been somewhat rewritten.

## STORIES

# ECOFABLE #3: THE LAWS OF THE EARTH

Mary de La Valette

Once, long ago, the peoples of the Earth worshipped the animals. They perceived them to be magical creatures, supernatural beings, full of light and Mystery. Their beauty was a source of inspiration and the people sought to emulate animals. They copied the elaborate courting rituals of the crane and the salmon and painted their bodies with bright colours and patterns like the brilliant birds, cats and monkeys of the forest. They built temples and erected totem poles and made sacred places to honor the wild creatures who lived so joyously and freely on the Earth. They told the stories of coyote and dolphin to their children and they immortalized the animals in song and dance throughout the circle of the seasons. Animals were their gods. The people marvelled at beings that lived so effortlessly on the Earth; at the great birds that soared in the heavens; at the giant whales gliding in mysterious oceans and at the tiny little pink-eared mice of the fields that cared for their young so tenderly. The people were in awe of the animals' beauty - at their sleek, glistening fur, at feathers the colour of rainbows, at the silver scales of the salmon and the iridescent wings of dragonflies. The liquid black eyes of the seal, the joy of the otter and the divine innocence of the lamb transcended any human beauty. Surely animals were perfect, the people thought. They could run as swiftly as the wind, soar and glide in the air and they knew how to travel by the sun and the moon and the stars over oceans and over continents. They had senses humans only vaguely understood. They were finished

creations, evolved; and perfected over millions of years, gifted beyond the people's comprehension, with senses, unknown to the people and perfectly attuned to the Earth that mothered all life.

The people observed how animals did not use clumsy speech to communicate with each other but had elegant, mystical senses of relating and understanding that transcended distance. They noted how animals cared for the Earth, controlled their populations and moved with the seasons in order not to burden the Earth. The animals held all the ancient secrets. They knew where the most luscious fruit grew, where healing herbs were to be found, where the coldest mountain clear water ran and when the Earth slept in winter and renewed herself, the animals slept with her. And when the tides were high and the moon was full, they celebrated the bounty and the blessings of the Earth. And the radiance of their souls created a paradise on Earth - they were indeed Earth's chosen children.

And this was the law of the Earth - that the animals should flourish and teach the people how to live on Earth. And this was as it should be. Everything was in harmony and all was at peace.

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# ELEMENTAL DUST

Aerin Caley

The Goddess had spent much time preparing herself. The face of the Earth was a beautiful and diverse landscape. In complex patterns, the winds and clear water caressed her face. Green plants with magnificent flowers grew in profusion.

Now the time came for the Goddess to populate the Earth. She started with the people of the Faerie. They were the creatures of High Magik, and the guardians of knowledge. The elven kind were ethereal and beautiful, beyond the Earth but linked to it. They were charged with the care of the land surrounding their haunts; a pond, meadow, forest or mountain. They were a happy people and the sound of their festivities and music rang through the universe.

Then she created the animals. They were more numerous than the Faerie, and had a much greater diversity. Their shapes were the embodiment of the Low Magik's many forms. The animals filled the Earth and prospered under the care of the elves.

The Earth was created in balance, but the Goddess did not rest. She saw that what she had created was good, but that it was static. Nature is a creature of change and so she made man and woman. These were neither beast nor Faerie, but a creature having elements of both.

Humans were formed of the Earth and were bound to it, but were also given the capability to use the High Magik. The Goddess imbued them with a sense of curiosity and wonderment. She foresaw a world where humans would be the go between; students of the Faerie, guardians of the animals, and friends to both. Nature was content with her work.

The Earth moved through time and the Goddess was happy. The Faerie were powerful and remained true to her and her charge; the animals lived their lives according to her patterns. The humans were moving towards their destiny. They worshipped Nature and through her and the elves, their knowledge grew.

But then things began to change. Men scorned the Faerie and turned away from the Goddess. They abandoned magik and embraced science. With their limited understanding they did not see the truth; that magik and science were one, what man had turned away from was morality.

With reckless haste humankind destroyed the world in order to satisfy its greed. The Faerie were the first to go. The human's link to the Earth made them immune to the elves powers. The

Elves had no such protection, and so, limited human knowledge of High Magik was enough to destroy them. The Faerie were destroyed or forced into isolation so that few humans even remembered their existence.

The universe no longer echoed with their intricate harmonies. The Goddess stung from the blow but was inclined to give her creatures another chance.

Next the humans destroyed the animals. It started innocently enough with domestication. The Goddess was pleased with their imagination, but this did not last. In order to maintain their herds the humans began to exterminate predators. The presence of an ensured food supply also meant that the people gathered in bigger groups and moved less. As towns and cities developed, the humans' link with their mother grew even more tenuous.

The Goddess was angry, but her efforts to right the upset balance deflected her rage from the humans. In the face of this apparent approval, the humans made their most horrific encroachment.

In their arrogance the humans violated the Earth itself. For many years the Goddess was paralysed as men dug into her body, searching for her bones. They stripped her of her iron and minerals, and ripped her apart in their desire for precious stones. In the process, they further abused the animals and polluted the Earth.

The Faerie, in their hiding places, heard the groans of their mother. They risked themselves to plea to the people, but few heard. Some of the humans saw the danger of the situation but they were ignored and persecuted.

Finally, the Goddess could bear it no longer. Her favourite creations had become parasites, not to be endured. Rousing all her power, nature destroyed everything she had created, even the innocents, because men had warped them beyond repair. Then she grieved for her creatures, and a quiet wind stirred all that was left. The world was no more than elemental dust.

About the Author: **Aerin Caley** is an 18 year old writer and poet. She has contributed to and edited three anthologies of short stories and poetry. Her interests include Aboriginal and Eastern philosophy, fantasy and ecosophy. These have been fostered since birth by an eccentric and iconoclastic, but loving, father.

# THE SWEET TASTE OF VINEGAR

Michael Caley

I have, for a very long time, wondered why we seem to defecate where we live. Why is it that living within our **environmental means** seems to be so difficult? Why does environmental education seem to be so ineffective in terms of the very large problems that face us?

I bring together two items here that have recently aroused my thinking about problems of environmental education. First, in a letter to Eric Utne, (*The Utne Reader* No. 48, 1991), R. Thomas Tanner, Professor of Environmental Studies and Education, Iowa State University reports on a small study that he undertook "more than a decade ago".

Tanner asked a "select sample of leading environmental activists", "What were the formative influences, the significant life experiences, that led to your activism?". The answer is as follows: "frequent, playful, unstructured childhood contact with relatively pristine habitats was described by more than 45 of my subjects than was any other influence".

The lives of many environmentally prominent people come to mind almost immediately; Gary Snyder, Aldo Leopold, Daniel Koslovsky and the Muries are those I am most familiar with. Surely my readers can identify either from acquaintance or from biographies many others. Perhaps they can include themselves in this group. I wish that I could. My exposure to pristine habitats came in adulthood and under rather controlled conditions. I am changing that now.

Tanner goes on to state, "With more than three-quarters of American children being raised in urban-suburban environments, one must wonder from whence will come the next generation of those dedicated to protecting the world of nature." An important problem! There is no evidence that I know of that shows that formal schooling in environmental courses has any significant long-term impact on environmental thinking or action in children or adults.

My second item comes from re-reading Hoff's *The Tao of Pooh*. In the book, Hoff relates the story of the picture entitled "The Vinegar Tasters".

We see three men standing around a vinegar vat. Each has dipped his finger into the vinegar and has tasted it. The expression on each man's face shows his individual reaction. Since the painting is allegorical, we are to understand that these are no ordinary vinegar tasters, but are instead representatives of the "Three Teachings" of China, and that the vinegar they are tasting represents the Essence of Life. The three masters are K'ung Fu-tse (Confucius), Buddha and Lao-tse, author of the oldest existing book of Taoism. The first has a sour look on his face, the second wears a bitter expression, but the third man is smiling.

Hoff goes on to explain what each expression means, in terms each of Master's view of life.

To K'ung Fu-tse, life seemed rather sour. He believed that the present was out of step with the past and that the government

of man on earth was out of harmony with the way of Heaven, the government of the universe.... Under Confucianism, the use of precisely measured court music, prescribed steps, actions and phrases all added up to an extremely complex system of rituals, each used for a particular purpose at a particular time.

To Buddha, the second figure in the painting, life on earth was bitter, filled with attachments and desires that led to suffering.... In order to find peace, the Buddhist considered it necessary to transcend "the world of dust" and reach Nirvana, literally a state of "no wind".

To Lao-tse, the harmony that naturally existed between heaven and earth from the very beginning could be found by anyone at anytime, but not by following the rules of the Confucianists.... According to Lao-tse, the more man interfered with the natural balance produced and governed by the universal laws, the further away the harmony retreated into the distance. The more forcing, the more trouble.

At this time in the human sojourn with Gaia, the Confucianists seem to be in ascendance. The news media dwell obscenely on the problems of imbalance; mass murders seem to becoming common place, social revolution has turned the soviet hegemony upside down, sexual harassment held centre place for two weeks on Western TV, the collapse of the public education system is upon us, global environmental problems continue unabated and we have all but forgotten the **Exxon Valdez**. Through every one of these, and many other just as important issues, we are impeded by slavish adherence to the **proper rituals**.

Lovelock, in his book "Gaia" stated, "The eminence of a scientist is measured by the length of time that he holds up progress in his field". I suggest that this statement can be paraphrased for each and every specialist in each and every field of human endeavour, be it science, politics, economics, business, religion, education, etc. It is an immensely effective way of avoiding action, but it is **not** non-action (wu wei) in the Eastern sense. It is in some sense an ultimate Confucianism. Life is sour, but by adhering to tradition we can make it palatable and perhaps amass enough wealth to create the illusion of sweetness.

The Buddhist path of transcendence is an viable answer, but only for a very few, at least, at present. First, it takes a very long time and intense dedication to learn the meditative techniques necessary to be able to transcend the ills of the world. Second, it is a self-selected path; no one can be forced to transcend. Now, it might make for an interesting world if everyone selected this path, but the evidence suggests that most people will select the path of possessions and ownership. Two thousand years of recorded history affirms the Buddhist route, but it is not yet a sufficiently powerful short-term way to approach the global social, political and economic problems facing us. Life must remain bitter, and our only solace must be that some of us will

find the strength to transcend. The rest of us must make our "happiness" as best we can while we are here.

The Taoist path of seeking harmony between natural law and human law appeals strongly to me. It certainly appears to be very much like the childhood experiences of Tanner's activists. However, when Confucianists hold power there seems little hope that this path will have any more success than the Buddhist's, at least within present societal rituals, especially since it is contrary to Taoist philosophy to seek power.

This brings me back to Tanner's little study. If frequent, playful, unstructured childhood contact with relatively pristine habitats is necessary to develop the character that truly appreciates the natural, then we are in very, very deep trouble, much deeper than I, in my most pessimistic moments, ever thought. **Therefore, we must quickly devise methods for providing the relevant experience for as many children as possible! Can this even be done?**

Do you see the problem? How can the Confucianists, given that they perceive and understand what has happened and is happening, use their rituals to create a non-ritualistic space for children? The Confucianists will want to structure the experience so that they will be able to account for liability. **If children do not achieve the desired ends who will be held responsible?**

There exists and will continue to exist non-reflexive, non-recursive mindscapes (Caley & Sawada, 1986, in press) that will necessarily impede the development of the life space of children that is necessary for survival, as long as we adhere to our cherished rituals. Those of us who find the deep ecological approach complementary must set as our task methods of providing frequent, playful unstructured contact with natural **and with human systems**, in order to allow children to unfold as beings whose rituals develop as reflexive and recursive. The long-term objective is for natural and human systems to remerge. This is not any easy task. We may look to traditional cultures for models and inspiration, but we must remember that neither we nor our children are of these cultures. Therefore, it is of paramount importance that we do not take a Confucianist approach by simply adopting other rituals to replace our own.

Deep ecology movement supporters consider education as an environmental issue no different from soil loss, deforestation, desertification, ozone depletion, pollution, etc. They will have to apply their individual and group techniques and talents to

public education with as much will and vitality as they do to local, regional, national and global environmental issues. Our Confucianist concerns with proper ritual has brought us to the brink on many issues, the environment is only one aspect of this concatenation. And education is vital aspect of this mix.

What I am leading up to is a dramatic, radical, grassroots rethinking and restructuring of our education system. Current public education is a Confucianist's dream of ritual. There are layers upon layers of government bodies and the watchword is "accountability". Every layer is consciously eyeing every other layer to make sure that the rituals are observed exactly. Our children suffer in this malaise of officialdom. Look at your child's curriculum! Does it afford frequent, playful, unstructured contact with anything or anyone? If not, what are you doing about it?

In China those who practise and study Taijiquan are referred to as players at Taiji. It is the play aspect that differentiates the person who truly understands the essence of Taiji, from the person who studies it. It is frequent, **playful**, unstructured contact with the essence of life that we need to promote in education. Taking Lovelock's aphorism to heart, perhaps education, and especially environmental education, ought not to be left to the bureaucratic experts. We really cannot afford to have this field held up by eminence.

The essence of life is that the taste of vinegar is the taste of vinegar. Individual perceptions of the taste are only the result of how one has learned to play, or not, with the essence of life. How can we provide environmental play?

#### Notes

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3. Hoff, Benjamin. 1982. **The Tao of Pooh**, Penguin Books, Markham, Ontario.
4. Lovelock, James. 1979. **Gaia**. Oxford University Press, Oxford.

About the Author: **Michael Caley** is the coordinator of the Science and Technology hotline. He is a committed student of Taiji and Taoism. He has a Ph.D. in Education, which is one of his major interests.



## POETRY

### THE STORM

*Alice H. Drengson*

The roar of the ocean, the cry of the seas  
The lightning's loud crack and the wind's shrill tease  
The thunder's big bang and the rain's soft drops  
Sound all put together like spin around tops  
Its all very scary out there in the cold  
But in here its as warm as no buddy knows  
And when the storm clears up and the stars come out clear  
I'll still be in my house, I'll still be here  
Then the sun will come up fresh and bright  
Everything will be clean and set up to rights.

### SYMMETRY

*Mary de La Valette*

November trees,  
Naked in their beauty.  
Graceful bare arms  
Reaching for the still-warm sun.  
A tangle of the finest dark lace  
Against the pale winter sky.

Swaying their slender brown bodies  
To the dance of the Earth.  
Knowing this place  
Patiently,  
Intimately.  
Knowing the wind and the rain  
As friend and lover.  
Listening,  
Between Father Sky  
And Mother Earth,  
To the music of the Cosmos.

Now they draw down the sap  
Preparing for the winter sleep.  
Remembering  
The passion of Spring.  
Honoring the seasons,  
And death  
And resurrection.

What microcosmic symmetry.

### RIVER

*Mary de La Valette*

River of Ice  
River of sky,  
Swollen with meltwater  
Blind stirrings in your weed-green belly.  
River, singing in the Earth  
Of laughter and light

And ancient reckonings  
River white, tumbling stones  
River dark, gliding deep  
River wide, blue, voluptuous, triumphant,  
Mating with the sea.

I make prayers  
And offerings  
Smudging the air  
And softly chanting,  
Weaving my Being  
Into the Earth  
Into the Mystery.

### ANOTHER HEAVEN AND ANOTHER EARTH

*Mary de La Valette*

I would like you to know  
That we were not all like that.  
That some of us spent our lives  
Working for Peace  
Speaking for animals  
Tending the Earth.  
And that when you find  
The mass graves  
And the abatoirs  
And the laboratories  
Please understand  
That we were not all like that.

### SMUDGE EXPOSURE

*Peter Bruns*

Gazing lazily across hot, dusty steel  
A glinting image  
Brought to life by midday Sun  
Registers  
Flaunting polarized form.

Of spiral-flavored symmetry  
On endless, barren sea  
Float parabolic braids of silver  
Sweeping  
Intertwining although free.

Focus  
Apparatus translates greasy grace  
The shutter falls.

Highlight moves on  
Glance off tips of fading  
Outstretched limbs dissolving into hibernation  
To merge  
Once more with dull background.

Now out of context  
Can one tell. . .  
Whether galaxy  
Wave or waterfall?  
Grandeur transposed upon the screen  
Imagination's well.

## SUN COTT-ON-WOOD

*Peter Bruns*

lapis lazuli domed  
Sappysweet-scented alive  
olive leaflets sparkling  
in sun  
i  
on raft's  
lap o'luxury  
lie  
warm wafts  
ice-water by  
all soaking sun-  
drenched greening delight  
lapping lazily milky heat

## ECO-HAIKU

*Judith V. Waters*

The river of mist  
Waters the sleeping forest,  
And flows to the sky.

Hidden from the sun,  
Dayflowers and white lilies  
Bloom on the mountain.

Blue sky with white clouds,  
Pillows for the heads of wind,  
Blowing, then resting.

The full moon rises,  
Katydid and crickets sing  
Deep in the forest.  
Warm sun, pine needles,  
Lazy summer afternoon,  
wonderful fragrance.

Asleep in the sun,  
The rocks dream of becoming  
Soil, life, soil, and rocks.

Deep in the canyon  
The river flows through redrock  
Heat. Stillness. Wren song.

## CARMANAH SPIDER

*Sue Weaver*

The man's shadow razors  
the hollyhocks. It climbs  
the dry wall at the edge  
of the garden. Afraid  
of the dark, he clearcuts  
the valley and its layered  
shade. This erases the home  
of the spider just discovered.  
(The forest had known her  
all along.)

Crows arrive from everywhere.  
They call in the open-mouthed  
light above ground.

## STAR-STRUCK UTOPIAS OF 2000

*Antler*

What if Society became so obsessed with the stars  
as a result of Emerson's epiphany  
"It the stars came out only one night in a thousand years  
how people would believe and adore  
and preserve from generation to generation  
remembrance of the miracle they'd been shown"  
That everyone started sleeping during the day  
so they could stay up all night  
star-gazing, star-thinking, star-dreaming,  
Being in the Milky-Way so they could have  
maximum exposure to the Universe  
beyond Earth and our own Star.  
Rather than being consumed by human history,  
art, literature, music, religion, politics, business,  
consumed by the stars, hunger  
to be with them and  
star-roving MilkyWaydom,  
So much so that people spent more time  
looking at the Milky Way than at each other,  
more time looking up  
than straight ahead or down.  
Total blackout in all cities--  
no streetlights, stoplights, carlights,  
driving at night illegal,  
no lights in buildings but candles,  
Whole populations thronging to darkened  
baseball stadiums and skyscrapertops  
to sit holding hands en masse  
and look up at the billion year spree  
of the realm of the nebulae!

About the poets: **Alice Drengson** is in gradeschool. She likes to write and illustrate stories and poetry. **Mary de La Valette**, see article in this issue for her author's note. **Peter Bruns** is a student at the University of Victoria. "Sun Cott-on-wood" has appeared in **The Essence**. **Judith Waters** is an itinerant philosopher naturalist, who writes on nature and metaphysical themes. **Sue Wheeler** lives in the Gulf Islands of B.C., and has been active in local environmental issues. **Antler's** poetry has been published widely. He has published two books: **Factory** and **Last Words**.

## BOOKS: BRIEFLY NOTED

**The River Why?**, by David James Douglas, Bantam Books, New York, 1984, \$5.95US, \$7.50CN in paperback. This is the finest novel I've read with deep ecological sensibilities and insight into the processes of self transformation and realization. It is an exceptionally witty, beautifully written, engaging story that appeals to a wide range of readers. Beyond classification, a book one cannot put down or forget.

**Ghost Bears**, by R. Edward Grumbine, Island Press, 1992, \$25. Across the country and around the world, species that once flourished are now seldom seen. The impact of humans on organisms, ecosystems, and the biosphere has reached crisis proportions, but often this crisis is viewed in terms of a single species -- the spotted owl, the snail darter -- that is being threatened by a specific human action -- logging, dam building. Rarely are the essential links between human values, actions, and management goals that underlie the situation ever examined. Grumbine looks at the wide-ranging implications of this crisis and explains why our species-centered approach will ultimately fail to protect ecosystems and diversity. Using the fate of the endangered grizzly bear -- the "ghost bear" -- he explores the causes and effects of species loss and habitat destruction. Grumbine presents a clear assessment of the biodiversity crisis and introduces the new science of conservation biology.

**Environmentalism and Political Theory: Toward an Ecocentric Approach**, by Robin Eckersley, SUNY Press, Albany, \$14.95pb, \$44.50hc. This book provides the most detailed and comprehensive examination to date of the impact of environmentalism upon contemporary political thought. It sets out to unravel the various strands of Green political thought and explain their relationship to the major Western political traditions. This book represents the consolidation of a new field of political inquiry that is destined to become an increasingly important component of political studies and political reporting worldwide. An interdisciplinary study that builds bridges between environmental philosophy, ecological thought, and political inquiry, this book employs a wide range of new insights from environmental philosophy to outline a Green political perspective.

**American Environmentalism: The U.S. Environmental Movement, 1970- 1990**, edited by Riley E. Dunlap and Angela G. Mertig, Taylor and Francis, 1101 Vermont Ave, Suite 200, Washington, D.C. \$12.95pb. An anthology which includes the editors' introduction, with chapters by Mitchell on national environmental organizations, Freudenberg and Steinsapir on grass-roots environmentalism within minority communities, Devall on deep ecology and radical environmentalism, Caldwell on the globalization of environmentalism, McCloskey on an insider's perspective, and Dunlap on public opinion.

## MUSIC NOTES

**Migration**, CD by Peter Kater and Carlos Nakai, SilverWave Records, SD 704, P.O. Box 7943, Boulder, Colorado 80306.

This is an album which has no canned rhythm sounds. What a blessing to put it on in the morning when all is quiet! Kater's keyboard mastery coupled with Nakai's native flutes and whistles bring sharp visions of North American Nature into the living room. This is an evocative, celebratory album.

**Music from Canada's West Coast**, CD by New Earth, New Earth Producers, 118 Wildwood Ave., Victoria, B.C. V8S 3V9, \$16.95CN. If Migration conjures up visions and feelings of the North American Earth, New Earth's new album springs from the soil of Canada's West Coast, with overtones of Native and Oriental influences. It is the land that sings most clearly throughout. Cosmopolitan vernacular music which fuses just about everything and voices diversity. Fine musicianship, good concepts and right- on in feeling.

**Nobody Could Explain It**, CD by David Rothenberg, Accurate Records, P.O. Box 390115, Cambridge, MA 02139, \$14 + \$2 Postage. Clarinetist and composer Rothenberg's album blends the energy of the world's authentic cultures with the freedom of jazz improvisation. The music reflects the scope of his travels and includes recorded Tibetan wind pieces from Buddhist traditions, folk songs from Scandinavia, Hasidic chants, works inspired by texts from Eskimo shamans and the **I Ching**. The performance with other musicians is flawless, the sound quality excellent. This album presents global visions which sing from particular places and cultures.

**Winds of the Muse**, CD by Colin Farish, Winds of the Muse, 3230 Point White Drive, Bainbridge Island, WA 98110, \$14.95 + \$1.50 Shipping. This album consists of pieces for solo piano written and performed by keyboard poet Colin Farish. Most of the pieces on this album have environmental themes, such as Cloudburst, Peregrine, Eclipse, etc. The music has a serenity which reflects the quote from Krishnamurti on the cover: "As the waters of a pond become very quiet, very peaceful, when the breezes stop, so the mind is still when it is no longer creating problems." This music is excellent background for writing full-blooded prose. Farish has a new album on CD called "Curious Species" which I've not heard.

**100 Years of Hope**, CD by Earth and the 21st, featuring Guy Louis Sferlazza and Regina Harrison, available from Mackinac Chapter Sierra Club, 115 W. Allegan, Suite 10-B, Lansing, MI 48933, \$15. This album was put together to celebrate the Sierra Club's centennial. The album is in the tradition of folk-commentary, the music a fusion of various influences, jazz, new age, folk and rock. Both the voice passages and the instrumental sections are exceptionally well performed. A very satisfying album which weaves together some of the main themes of the Sierra Club's mission and projects over the last 100 years. But it is much more than that, it is music for and of the Earth and for the next 100 years.

N.B. all of the above albums are also available on cassette.

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